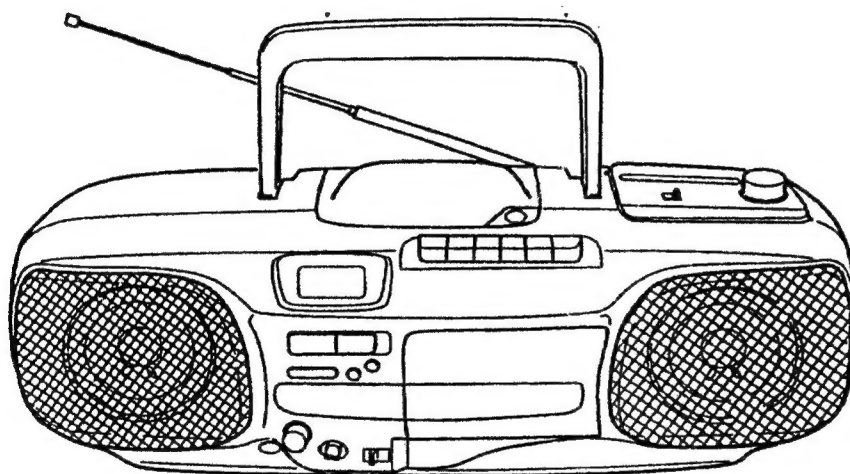


# JVC

## SERVICE MANUAL

### CD PORTABLE SYSTEM

# RC-X320BK B/E/EN/G/GI/VX



**COMPACT**  
**disc**  
DIGITAL AUDIO

#### Area Suffix

B	..... U.K.
E	..... Continental Europe
EN	..... Northern Europe
G	..... Germany
GI	..... Italy
VX	..... Eastern Europe

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## ■ Safety Precautions

1. The design this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacture's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety — related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of service manual. Electrical components having such features are identified by shading and (  $\Delta$  ) on the schematic diagram and by (  $\Delta$  ) on the parts list in the service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
5. Leakage current check (Electrical shock hazard testing)

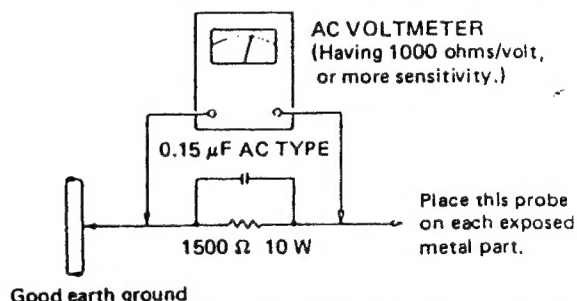
After re — assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. using a "Leakage current tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground.

Any leakage current must not exceed 0.5mA AC(r.m.s.)

- Alternate check method

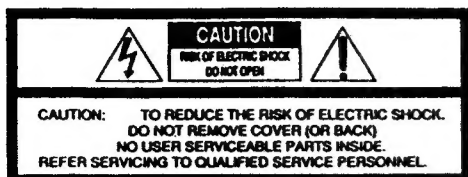
Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohms 10W resistor paralleled by a 0.15  $\mu$  F AC type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each



exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC(r.m.s.). This corresponds to 0.5mA AC(r.m.s.).

## ◆ Warning

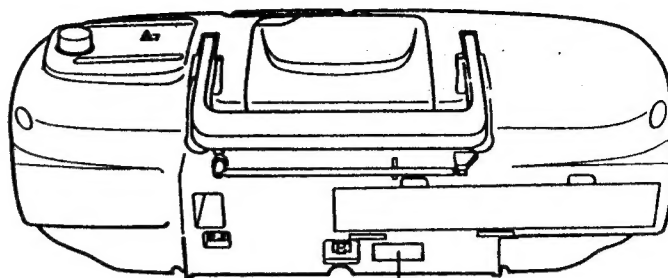
1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

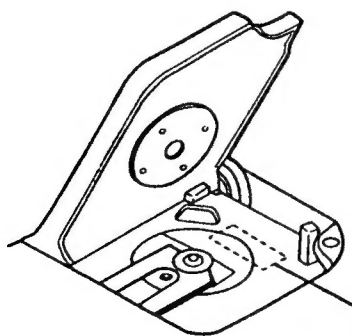


**Obs:**  
Apparaten innehåller laser  
komponent av högre laserklass  
än klass 1.

## B/E/G Only Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: Do not open the bottom cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. CAUTION: The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when unloading cartridge and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION: Use of controls of adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

## REPRODUCTION OF LABELS AND THEIR LOCATION



**ADVARSEL:** Der vil udstråles  
osynlig laserbestralning når  
apparater åbnes og aflas-  
ningsmekanismen frigøres.  
**UNDGA AT BLIVE UDSÆT  
FOR LASERBESTRALNING.**

**DANGER:** Invisible laser  
radiation when open and  
interlock defeated.  
**AVOID DIRECT EX-  
POSURE TO BEAM.**

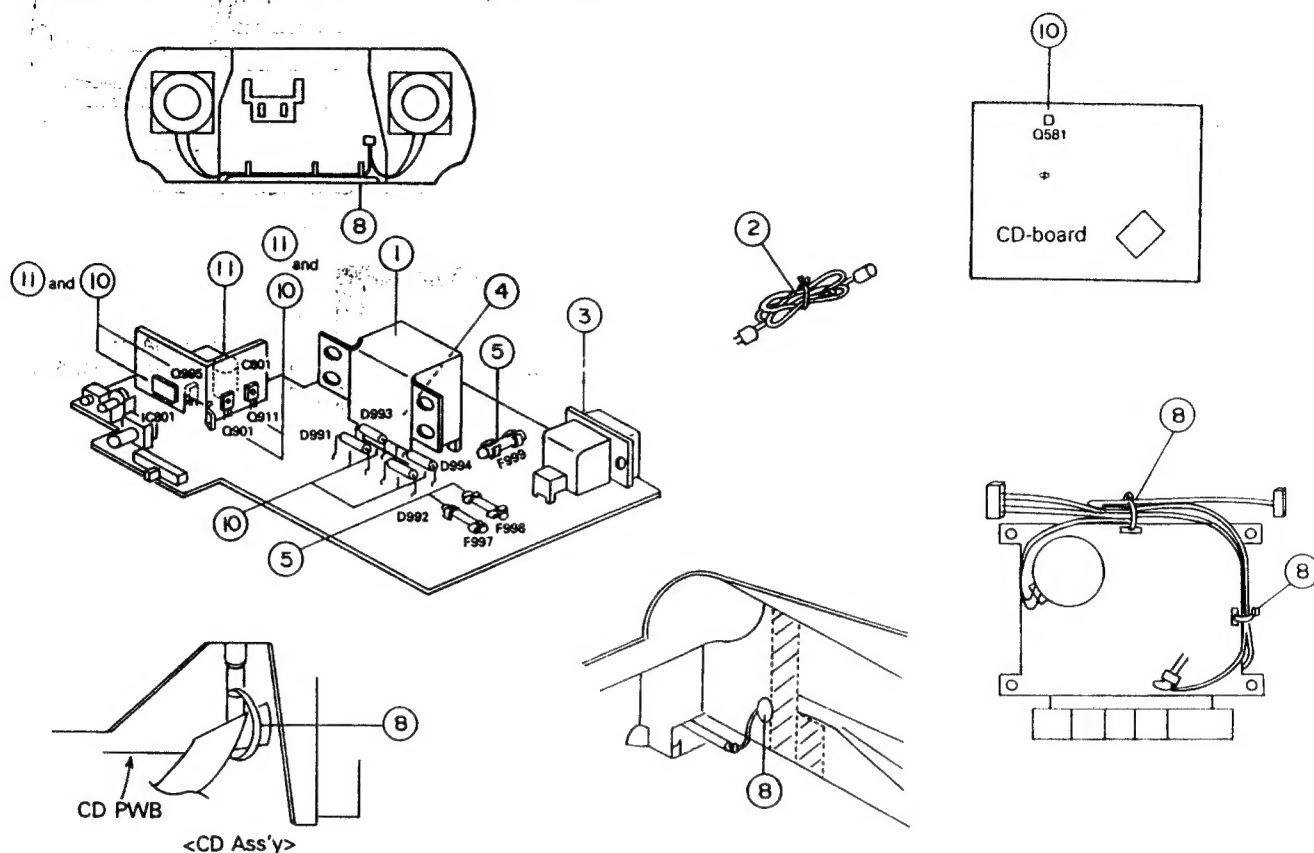
**ADVERSEL:** Usynlig laserstråling ved åbning. når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

**VAROITUS:** Varmuuskytikimen oliessa pois päältä kun laite avataan, siellä kehittyy näkymätöntä lasersäteitä. Älä pane itseäsi säteilyn alttiiksi.

**WARNING:** Osynlig laserståining uppstår vid komponentens öppning när säkerhetsbrytaren är frånslagen.

**ADVARSEL:** Usynlig laserstråling ved åpning når sikkerhetsbryteren er ude af funktion. Unngå utsettelse for stråling.

■ Important Management Points Regarding Safety  
(Item Demanding Special Safety Precautions)



- ① Confirm the following marking on the power transformer and the specified tightening torque of the screws retaining the power transformer.

Power transformer: Part No. VTP57P2-12I

- ② Confirm the following marking on the power cord and visually check its faultlessness in the appearance.

	B version	E/EN version	G/GI/VX version
Power cord	BS6500	S-54	S-54
Attachment plug	KP-610	KP-419C	KP-419C
Connector plug	KS-15F	KS-15F	KS-15F

- ③ Confirm the following marking on the AC socket and make sure that it is tightly retained to the P. C. board to avoid the circuit pattern from damage.

	B version	E/EN version	G/GI/VX version
AC socket	HSC1466	HSC1466	HSC1466

- ④ Concerning the primary terminals and the adjacent secondary terminals on the P. C. board, confirm that solders don't spread out of the soldering rounds.

- ⑤ For respective fuses, make sure that they are tightly set in the fuse holder besides confirmation of the rating, T3.15AL 250 V marks on the fuse cap as well as the fuse indications on the P. C. board before installation.

	Fuse Rating & Indication on P.C.B.		
Ref. No.	B version	E/EN version	G/GI/VX version
F998	3.15 A/250 V	3.15 A/250 V	3.15 A/250 V
F997		3.15 A/250 V	

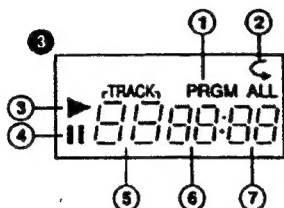
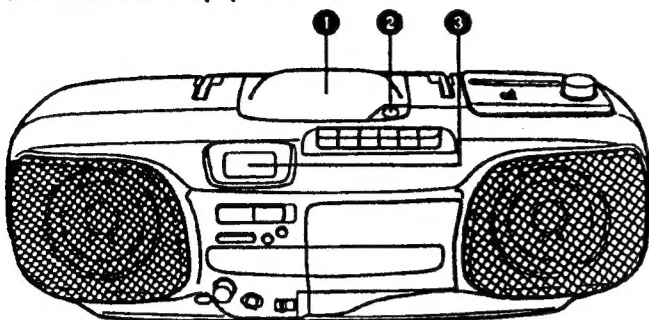
- ⑥ Confirm that wires are tightly fixed or clamped in the spec positions (at 5 points) to secure them apart from the live parts, moving parts, hot parts and sharp edges.

- ⑦ The following are heating parts, particularly, those in the box must be managed as flammable parts. Confirm that they are lifted up and are not tilting.

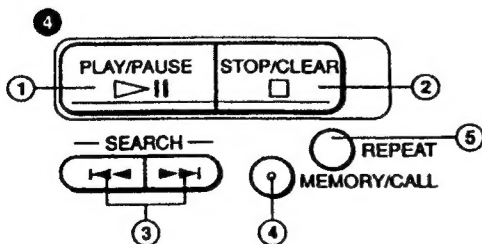
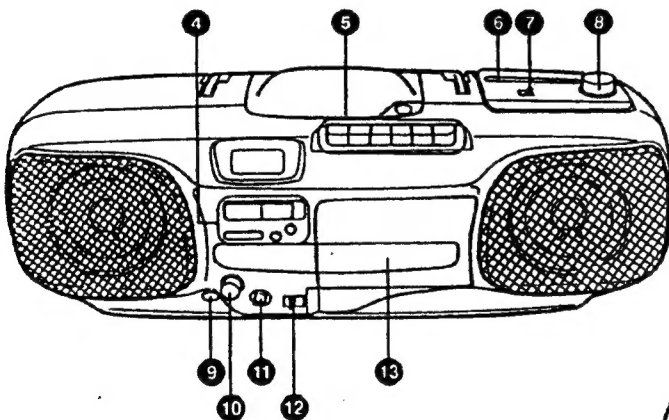
IC801, Q911, Q901, Q995, Q581, D991 to D994, IC502 Heat sink

## ■ Name of Parts and their Functions

### ◆ Front and Top panel section



- Disc holder
- Disc holder open button (▲)
- Display window (CD player section)
  - ① Program mode indicator (PRGM)
  - ② Repeat playback indicator (◀ ALL)
  - ③ Playback indicator (▶)
  - ④ Pause Indicator (||)
  - ⑤ Track (tune) number display
  - ⑥ Program order number/Time (minute) display
  - ⑦ Time (second) display



- CD operation buttons
  - ① PLAY/PAUSE (▶||) button
  - ② STOP/CLEAR (□) button
  - ③ SEARCH (◀▶) button
  - ④ MEMORY/CALL button
  - ⑤ REPEAT button

### ● Cassette operation buttons

#### ■ PAUSE:

Press to stop the tape temporarily during playback and recording.

#### ■/▲ STOP/EJECT:

Press to stop the tape. Pressing this button after the tape stops opens the cassette holder.

#### ◀◀ FF:

Press to wind the tape forward rapidly.

#### ▶▶ REW:

Press to rewind the tape rapidly.

#### ◀ PLAY:

Press to play the tape.

#### ○ REC:

Press this button with ◀ PLAY button to start recording.

### ● Dial scale

#### ● BAND switch (FM MONO/FM STEREO/MW/LW)

FM MONO: Set to this position when FM stereo reception is obscured by noise.

FM STEREO: Set to this position to listen to or record an FM stereo broadcast.

MW: Set to this position to listen to or record an MW broadcast.

LW: Set to this position to listen to or record an LW broadcast.

### ● TUNING knob

#### ● PHONES jack (3.5 mm dia. stereo mini)

Connect headphones (impedance 16 Ω – 1 kΩ) to this jack. The speakers are automatically switched off with the headphones connected.

### ● VOLUME control

### ● TONE control

### ● FUNCTION switch

#### TAPE/CD-TUNER STANDBY

Set to this position when listening to a cassette or when switching off the CD and TUNER mode.

#### TUNER

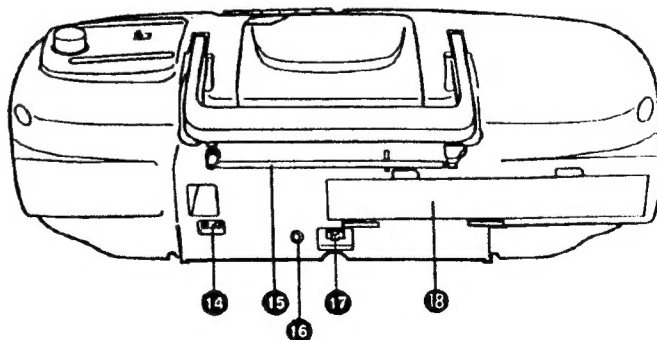
Set to this position when listening to or recording from the radio.

#### CD

Set to this position when listening to or recording from a CD.

### ● Cassette holder

### ◆ Rear panel section



#### ● AC IN (AC input) jack

#### ● Telescopic antenna

#### ● DC IN 12 V jack (⊕ ⊖) (E/EN only)

#### ● BEAT CUT switch

#### ● Battery compartment cover

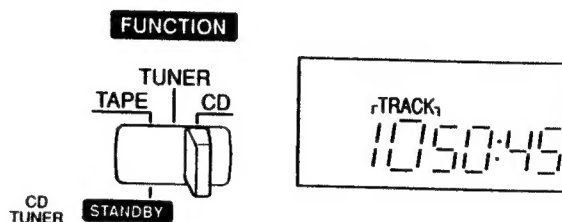
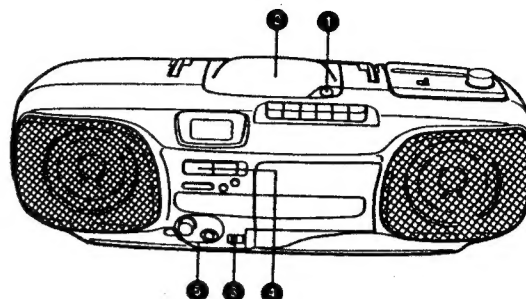
## PLAYING COMPACT DISCS



**Playing an entire disc ...** The following example assumes a compact disc with 10 tunes and a total playing time of 50 minutes 45 seconds.

**Operate in the order shown**

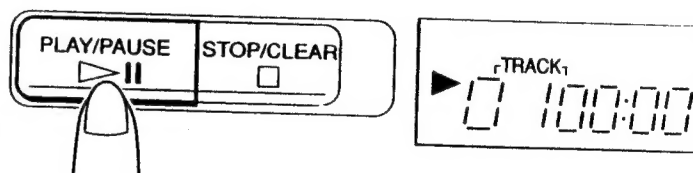
- ① Press to open the Disc holder.
- ② Load a disc with the label side facing up and close the Disc holder.
- ③ Set to the CD mode.
  - When a CD is first loaded, the total number of tracks (tunes) and total playing time are displayed.



- ④ Press to start play.
  - The track (tune) number and playback time are displayed.

- ⑤ Adjust.

- 8-cm (3-3/16") compact discs can be used in this unit without an adapter.



### Skip playback

- During playback, it is possible to skip forward to the beginning of the next tune or back to the beginning of the tune being played or the previous tune; when the beginning of the required tune has been located, play starts automatically.

**To listen to the next tune ...**

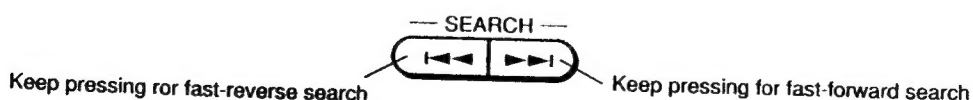
Press the ►► button once to skip to the beginning of the next tune.

**To listen to the previous tune ...**

Press the ◀◀ button to skip to the beginning of the tune being played back and press again to skip to the beginning of the previous tune.



**Search playback (to locate the required position on the disc)**

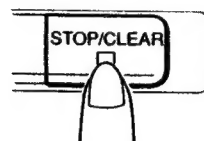
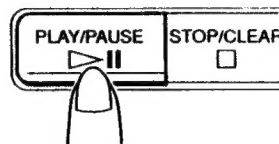
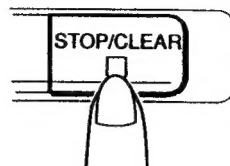
- The required position can be located using fast-forward or reverse search while playing a disc.




- Hold down the button; search play starts slowly and then gradually increases in speed.
- Since low-volume sound (at about one quarter of the normal level) can be heard in the search mode, monitor the sound and release the button when the required position is located.

## To stop play

- **To stop in the middle of a disc**  
During playback, press the  STOP/CLEAR button to stop play.
- **To stop a disc temporarily**  
Press the  PLAY/PAUSE button to stop play temporarily. When pressed again, play resumes from the point where it was paused.

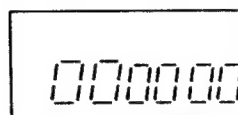


### Caution:

To change discs, press the  STOP/CLEAR button; check that the disc has stopped rotating completely before unloading it.



### Notes:

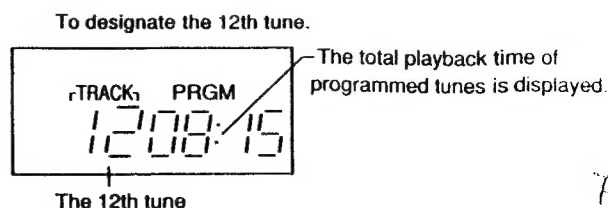
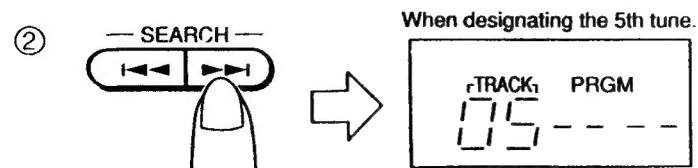
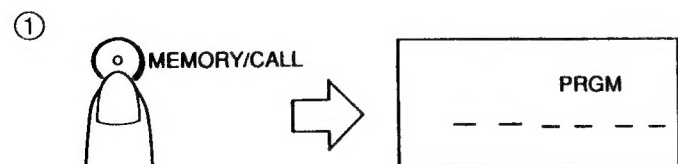
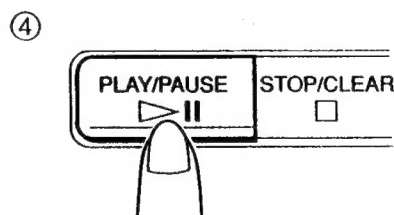
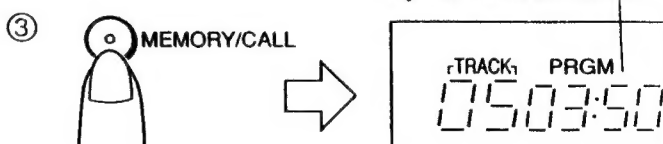
- The following indication may be shown when a disc is dirty or scratched, or when the disc is loaded upside down.  
In such a case, check the disc and insert again after cleaning the disc or turning it over.
- Do not use the unit at excessive high or cold temperatures. The recommended temperature range is from 5°C (41°F) to 35°C (95°F).
- After playback, unload the disc and close the Disc holder.
- If mistracking occurs during play, lower the volume.
- Mistracking may occur if a strong shock is applied to the unit or if it is used in a place subject to vibrations (i.e. in a car travelling on a rough road).



## Programmed play

- Up to 20 tunes can be programmed to be played in any required order.  
The total playing time of programmed tunes is displayed (up to 99 minutes, 59 seconds).

- ① Press the MEMORY/CALL button to set to the programming mode.
- ② Press to designate the required track number.
  - To count down the track number, press the  button.
- ③ Press the MEMORY/CALL button to program the track (tune) number.
  - Repeat steps ② and ③ to program other tunes.
- ④ Press the  PLAY/PAUSE button when programming is completed. Programmed playback starts.



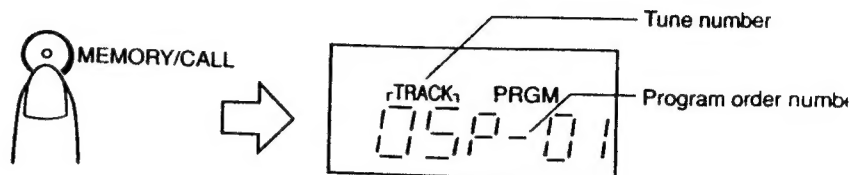


#### To clear the programmed tunes ...

Press the  $\square$  STOP/CLEAR button before playing a disc. During programmed playback, press this button twice. When the Disc holder is opened, programmed tunes are cleared automatically.

#### To confirm the details of a program ...

Press the MEMORY/CALL button for more than 1 second; the tunes making up the program will be displayed in programmed order.



#### Note:

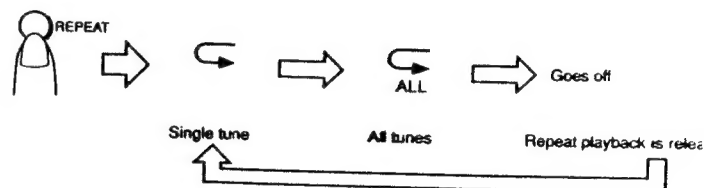
- When a track number that is higher than 21 is programmed for a disc which contains more than 21 tunes, the track No. is displayed, however, "...--" is shown in the total playback time.

#### Repeat play

Press the REPEAT button before or during play. A single tune or all the tunes can be repeated.

Whether a single tune or all tunes are to be repeated can be specified. Each time the REPEAT button is pressed, the mode will change from a single tune ( $\subseteq$ ), to all the tunes ( $\subseteq$  ALL), to the clear mode, in this order.

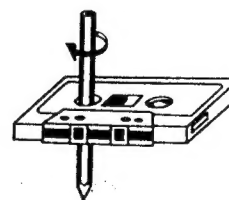
- **Repeat playback of a single tune ( $\subseteq$ )**  
The tune being played back will be heard repeatedly.
- **Repeat playback of all tunes ( $\subseteq$  ALL)**  
When playing back an entire disc or programmed tunes, all tunes or the programmed tunes will be heard repeatedly.



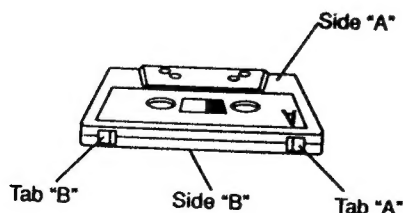
## CASSETTE TAPE

#### Cassette tape

1. Loose tape may cause trouble. With a pencil, gently tighten the tape as shown.
2. To prevent recordings from being erased accidentally, remove the tab(s) with a screwdriver. Reseal the slots with adhesive tape to erase and re-record after the tabs have been broken off.

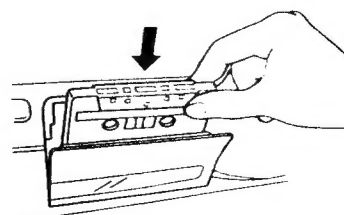


Turn the pencil to lighten the tape.



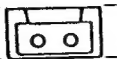
#### Cassette loading

1. Press the  $\blacksquare/\blacktriangle$  STOP/EJECT button to open the cassette holder.
2. Load a cassette tape as shown.
3. Close the cassette holder by pressing it gently. Listen for the click that tells you that you've closed the holder securely.



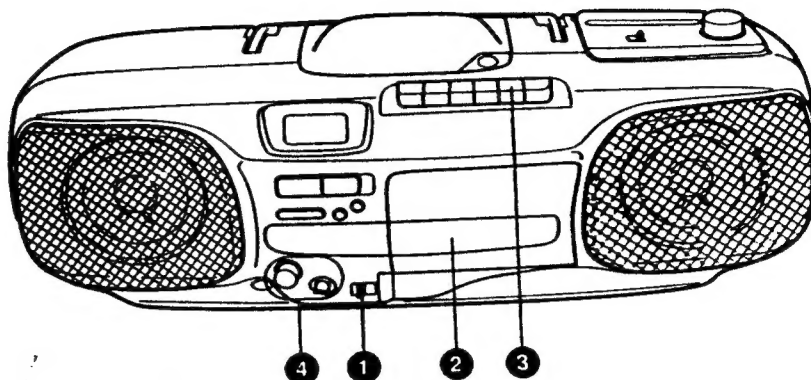


## CASSETTE PLAYBACK



Operate in the order shown

- ① Set to TAPE.
- ② Load a cassette. (Use normal tapes for this unit.)
- ③ Press to start playback.
- ④ Adjust.



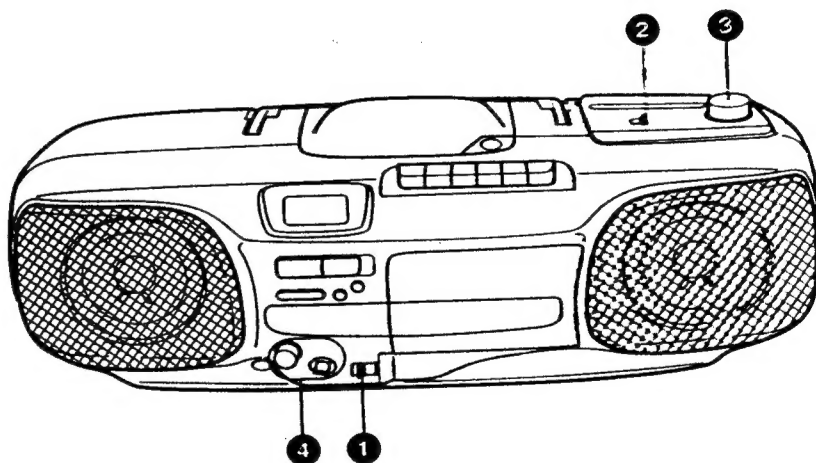
## RADIO RECEPTION



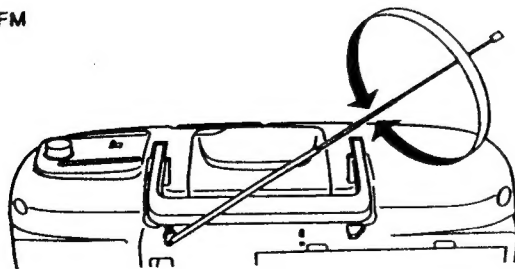
Operate in the order shown

- ① Set to TUNER
- ② Select the band
- ③ Tune to the required station.
- ④ Adjust.

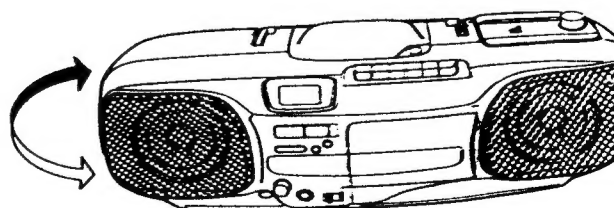
Using the antennas



FM



MW/LW



### Note:

The built-in ferrite core antenna can pick up interference from television receivers in the neighborhood and thereby disturb MW and LW reception.

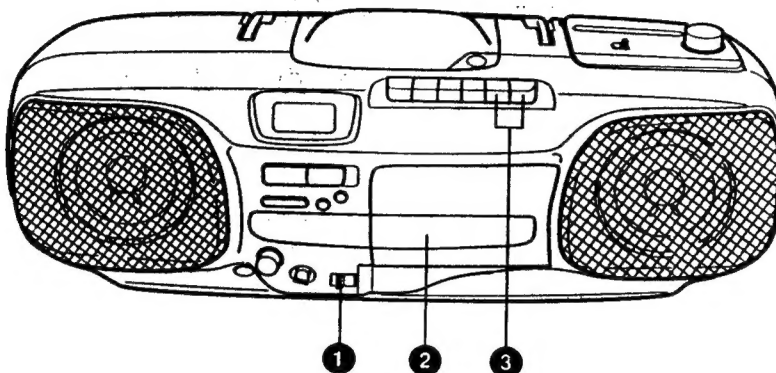
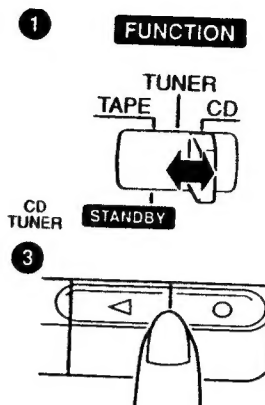
## RECORDING



- In recording, the ALC circuit automatically optimizes the recording level; adjustment of the recording level is unnecessary.

Operate in order shown.

- 1 Select the recording source.
  - When recording from the radio.....TUNER
  - When recording from the CD player.....CD
- 2 Load a cassette. (See the note below.)
- 3 Press the REC and PLAY buttons simultaneously.



### Note:

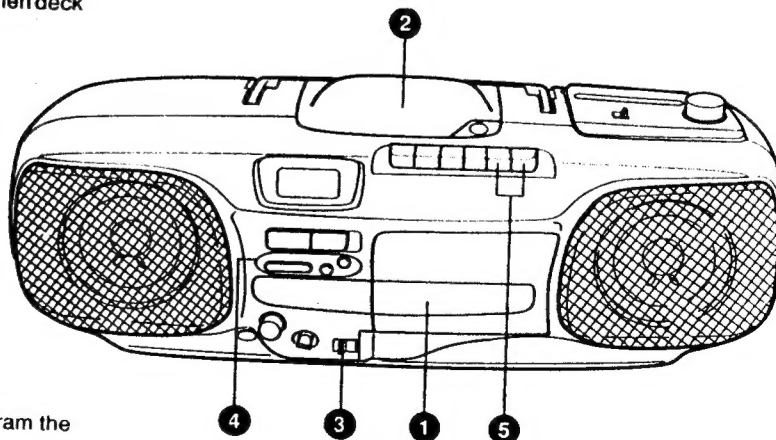
- The recording /playback characteristics of this unit are those of normal tape. Normal tape has different characteristics from CrO<sub>2</sub> and metal tapes.

It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

## Synchronized recording with the CD player

- In this system, the CD player starts playback when deck enters the recording mode.

Operate in the order shown



- 1 Load a cassette.
  - 2 Load a disc.
  - 3 Set to CD.
  - 4 When programmed playback is required, program the required tunes.
  - 5 Press the REC button with the PLAY button; synchronized recording will start.
- Non-recorded sections of approx. 4 seconds are automatically left between tunes.
  - When the tape reaches the end first, the CD player stops automatically; when the CD player stops first, the tape continues running. In this case, press the STOP/EJECT button to stop the tape.

- When automatic spacing between tunes is not required ...

Perform the following after finishing the previous operation (① to ②).

- ① Press the ▷|| PLAY/PAUSE button of the CD player twice. The CD player enters the pause mode.
- ② Press the ○ REC and ◀ PLAY buttons simultaneously. Now, the CD player starts playback simultaneously.

#### ■ PAUSE button

First of all, press the || PAUSE button. Then, press the ○ REC and ◀ PLAY buttons, thus entering the record-pause (standby) mode. After that re-press the || PAUSE button at the exact moment you want to start recording. This releases the tape to begin recording at a precise moment.

- Do not leave the unit in pause mode for more than a few minutes. Instead, push the ■/▲ STOP/EJECT button and turn the power off.

#### Full auto-stop mechanism

When the tape reaches either end during the recording/playback and fast forward or rewinding mode, the tape stops automatically.

#### BEAT CUT switch

When recording an AM broadcast, beats may be produced which are not heard when listening to the broadcast. In such a case, set this switch so that the beats are eliminated. Normally set this switch to "NORM 1".

#### Erasing

When recording on a pre-recorded tape, the previous recording is automatically erased and only the new material can be heard when the tape is played.

To erase a tape without making a new recording ...

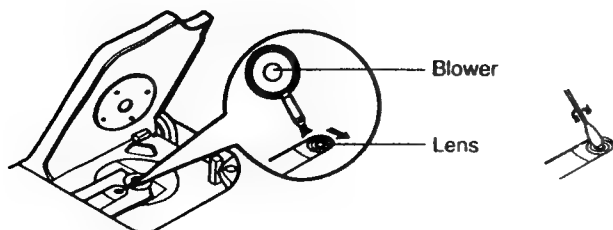
Follow the section "RECORDING" but in step ①, set the FUNCTION switch to TAPE then perform recording to erase a tape.

#### Cleaning the lens

If the lens in the CD pickup is dirty, this could degrade sound.

Open the disc holder and clean the lens as shown.

- Use a blower (available from a camera store) to blow dust off the lens.
- If there are fingerprints, etc. on the lens, gently wipe clean with a cotton swab.



## FEATURES

1. Portable system incorporating multi-function CD player.
  - CD player with programmed play of up to 20 tunes/ repeat play function.
  - Digital LCD (Liquid Crystal Display) indicates the playback time of each tune and the number and total playback time of programmed tunes.
  - 8-cm (3-3/16") "CD singles" capability.
2. Synchro-record start for CD recording convenience.
3. Full auto-stop mechanism.
4. SUPER BASS HORN system.

## SPECIFICATIONS

### Compact disc player section

Type	: Compact disc player
Signal detection system	: Non-contact optical pickup (semiconductor laser)
Number of channels	: 2 channels (stereo)
Frequency response	: 20 Hz – 20,000 Hz
Signal-to-noise ratio	: 76 dB
Wow & flutter	: Less than measurable limit
<b>Radio Section</b>	
Frequency range	: FM 88 – 108 MHz (B/E/EN/G) 87.5 – 108 MHz (GI) 65 – 73 MHz (VX) AM 540 – 1,600 kHz (B/E/EN/G/VX) 526 – 1,607 kHz (GI) LW 150 – 280 kHz (B/E/EN/G/VX) 148 – 284 kHz (GI)
Antennas	: Telescopic antenna for FM Ferrite core antenna for AM

### Tape deck Section

Track system	: 4-track 2-channel stereo
Motor	: Electronic governor DC motor for capstan
Heads	: Hard permalloy head (for recording/playback), Magnetic head for erasure
Frequency response	: 80 – 12,500 Hz
Wow & flutter	: 0.15% (WRMS)
Fast wind time	: Approx. 120 sec. (C-60 cassette)

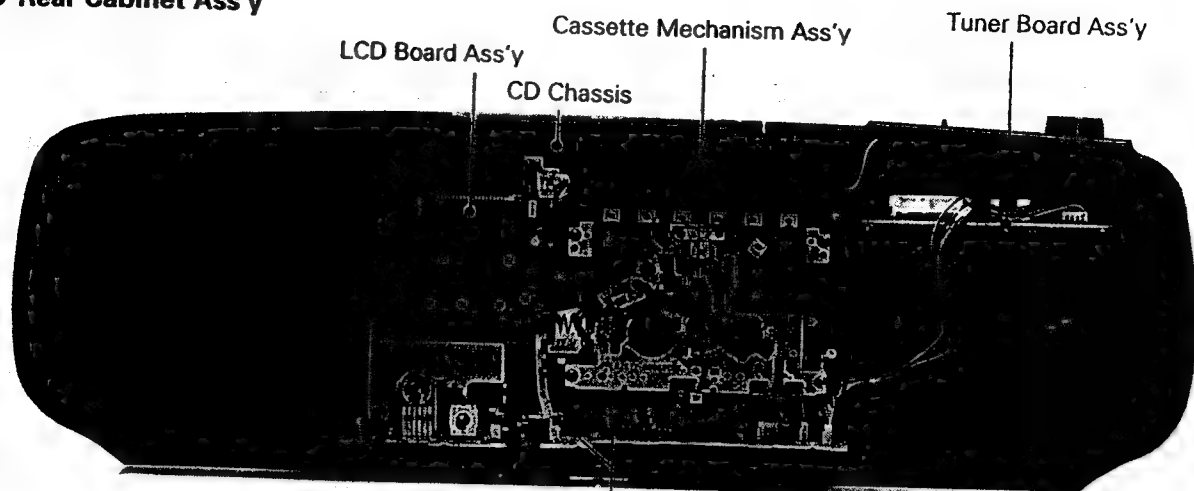
### General

Speakers	: 10cm (3-15/16") x 2
Power output	: 16 W (8 W + 8 W) at 3 Ω (max.) 10 W (5 W + 5 W) at 3 Ω (10% THD)
Output terminals	: PHONES x 1 (Output level: 0 – 15 mW/32 Ω, Matching impedance: 16 Ω – 1 kΩ)
Power supply	: AC 230 V, 50/60 Hz (E/EN/G/GI/VX) AC 240 V, 50/60 Hz (B) EXT DC 12 V (E/EN) DC 12 V (8 "D" batteries)
Power consumption	: 27 W (with POWER ON) 2 W (with POWER STANDBY)
Dimensions	: 576 (W) x 187 (H) x 247 (D) mm (22-11/16" x 7-3/8" x 9-3/4") including knobs
Weight	: Approx. 4.6 kg (10.2 lbs) (without batteries) Approx. 5.4 kg (12.0 lbs) (with batteries)

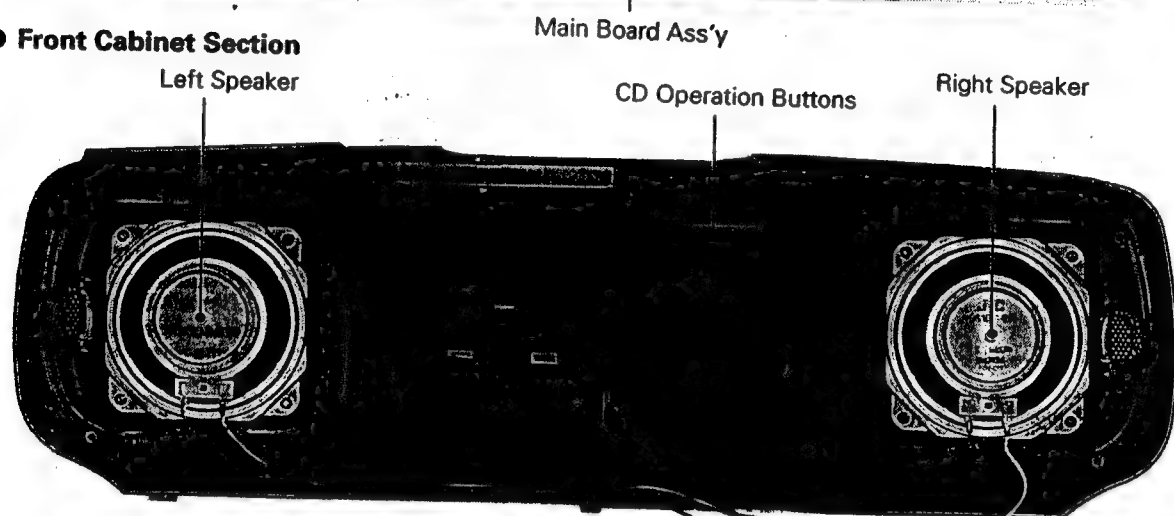
Design and specifications are subject to change without notice.

# 1 Location of Main Parts

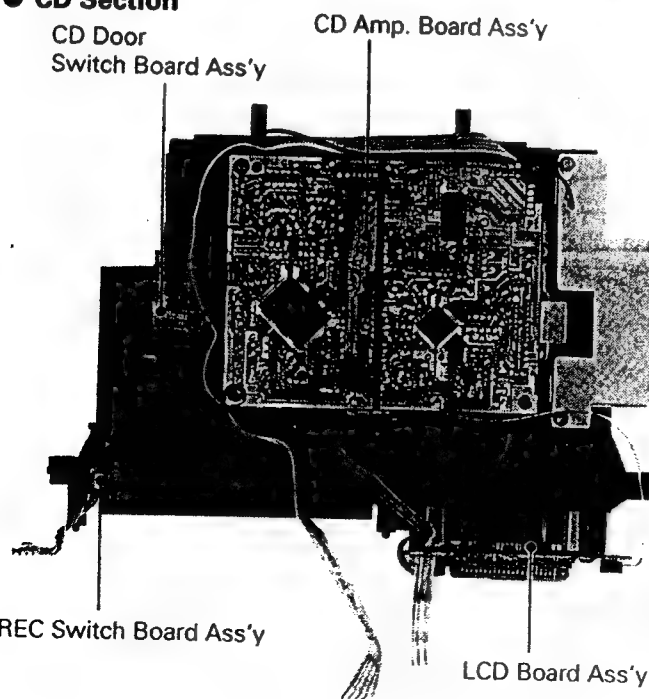
## ● Rear Cabinet Ass'y



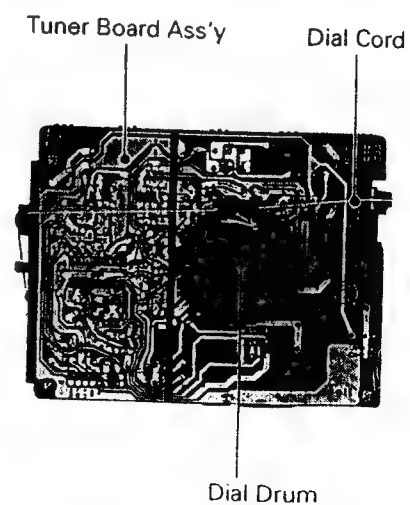
## ● Front Cabinet Section



## ● CD Section



## ● Tuner Section



## 2 Removal of Main Parts

### ■ Enclosure section

#### ◆ Front cabinet ass'y (See Fig. 2-1)

- 1) Pull and remove the volume and tone knobs. (It is easier to remove the knobs after wrapping adhesive tape around them.)
- 2) Remove the nine cabinet retaining screws ① from the rear panel. (See Fig. 2-1-1)
- 3) Press the eject button to open the cassette door and remove the door from the bottom outwards.
- 4) Remove the speaker wire connector (CN801) from the main board ass'y. (See Fig. 2-1-2)
- 5) Remove the front cabinet ass'y.

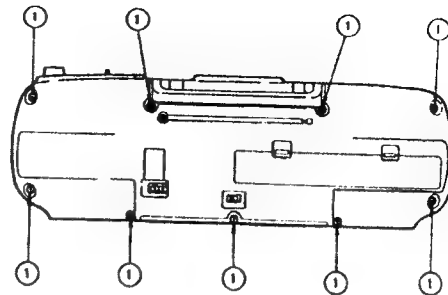


Fig. 2-1-1

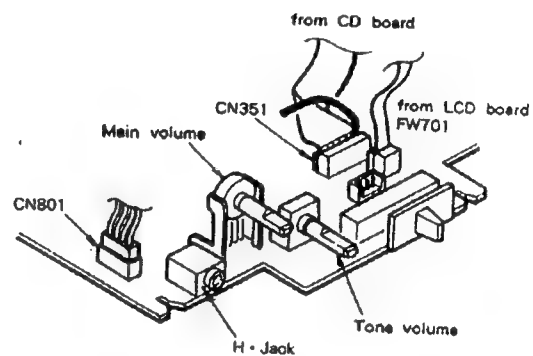


Fig. 2-1-2

#### ◆ Mechanism ass'y (See Fig. 2-2)

- 1) Remove the four screws ② retaining the mechanism.
- 2) Remove the head wire connector (CN301) and motor/switch wire connector (CN302) from the main board ass'y.
- 3) Remove the mechanism ass'y.

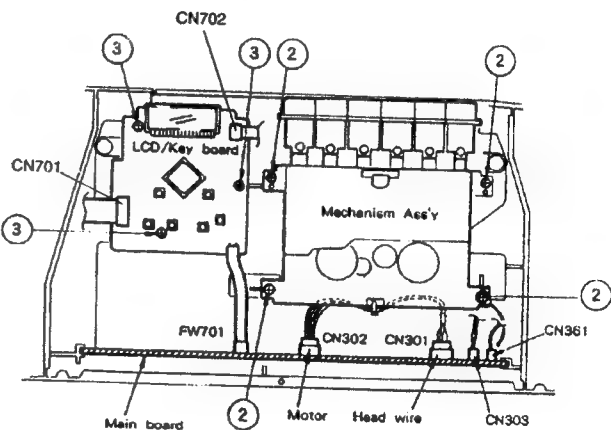


Fig. 2-2

#### ◆ LCD board ass'y (See Fig. 2-1-2 and Fig. 2-2)

- 1) Remove connectors CN701 and CN702 from the LCD board ass'y.
- 2) Remove connector FW701 from the main board ass'y.
- 3) Remove the three screws ③ and remove the LCD board ass'y.

#### ◆ CD unit (See Fig. 2-1-2 and Fig. 2-3)

- 1) Remove the recording switch connector (CN303) from the main board ass'y.
- 2) Remove the CD connector (CN351) from the main board ass'y. (See Fig. 2-1-2)
- 3) Remove the CD unit.

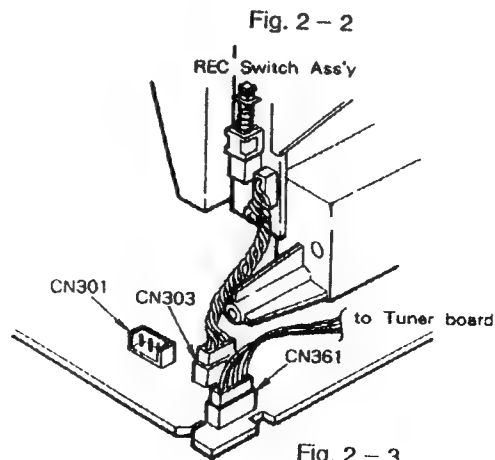


Fig. 2-3

◆ **Tuner unit** (See Fig. 2-4)

- 1) Remove the tuner knob.
- 2) Remove the tuner connector (CN - 361) from the main board ass'y.
- 3) Remove the two screws ④ retaining the tuner board ass'y.
- 4) Pull the tuner unit toward you by pressing down the tuner board ass'y, in order to remove the cabinet from the band switch lever.
- 5) Remove the antenna wire (TP1) and pull out the tuner board ass'y.
- 6) Remove the tuner unit.

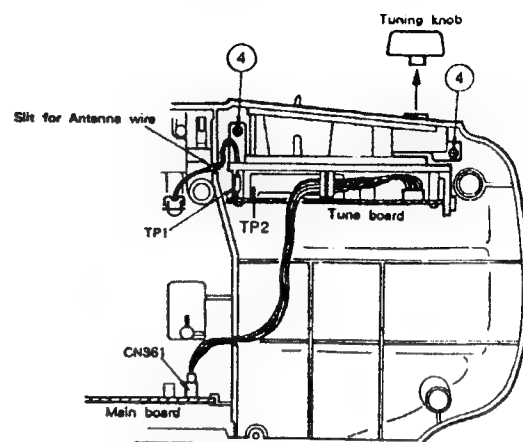


Fig. 2 - 4

◆ **Main board ass'y** (See Fig. 2-5)

- 1) Remove CN999 from the battery board ass'y.
- 2) Remove the two screws ⑤ retaining the power transformer.
- 3) Remove the two screws ⑥ retaining the AC jack.
- 4) Remove the main board ass'y.

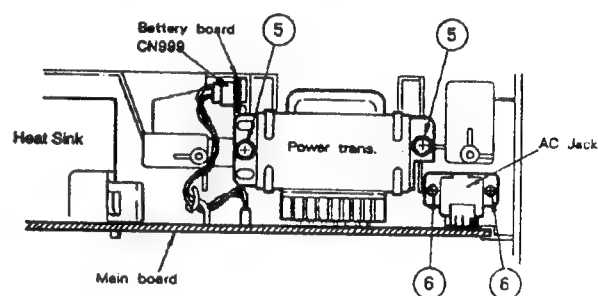


Fig. 2 - 5

◆ **Tuner board ass'y**

- 1) Remove the tuner unit.
- 2) Remove the dial cord.
- 3) Remove the three screws retaining the tuner board ass'y.
- 4) Remove the tuner board ass'y.

When reinstalling the dial cord, refer to the illustration in "Installation of the dial cord". (See page 18)

◆ **CD board ass'y and CD mechanism ass'y**

(See Fig. 2-6)

- 1) Remove the CD unit.
- 2) Remove the two screws ⑦ retaining the CD board ass'y.
- 3) Remove the cord wire connector (CN501) from the CD board ass'y.
- 4) Remove the CD board ass'y. (When the CD board ass'y is connected to the pickup, remove the required parts first.)
- 5) Remove the four screws ⑧ retaining the CD mechanism ass'y.

(The CD mechanism is also removed when removing the CD board ass'y as they are connected.)

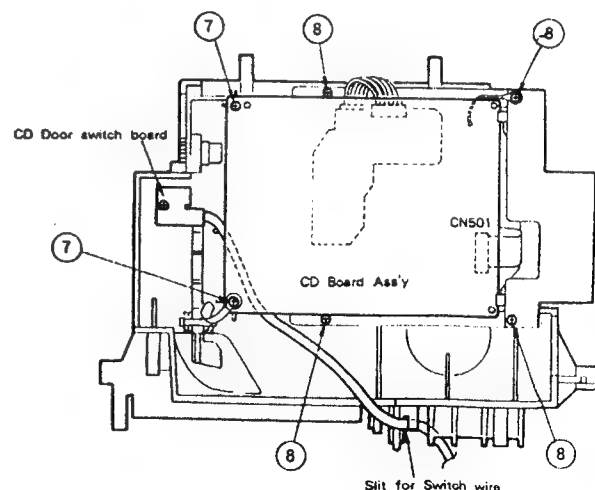


Fig. 2 - 6

### ◆ CD pickup unit replacement method (See. Fig. 2-7)

- 1) Remove the four screws ⑨ retaining the pickup cover.
- 2) Press the pickup shaft stopper in the direction of the arrow and remove the shaft in the direction of the spindle motor, in order to disengage the pickup.
- 3) Pull and remove the spindle (turntable) using the required jigs.
- 4) Remove the four screws ⑩ retaining the spindle motor and feed motor.
- 5) Remove the screw ⑪ retaining the motor board ass'y from the rear.
- 6) Replace the CD pickup unit.

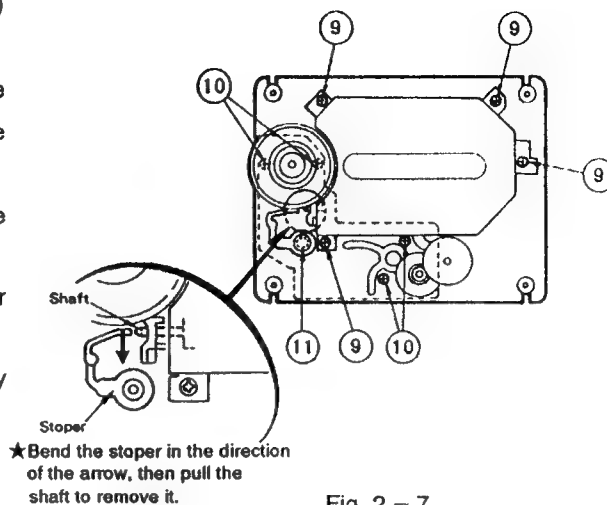


Fig. 2 - 7

### ◆ CD door (See Fig. 2-8)

- 1) Open the door and remove the door shaft by inserting a minus (-) screwdriver, as shown.
- 2) CD door assembly
  - a) Position the door spring on the chassis, as shown.
  - b) Install the right side (spring side) of the door facing you.
  - c) Align the left side slit of the door with the shaft when installing the CD door.

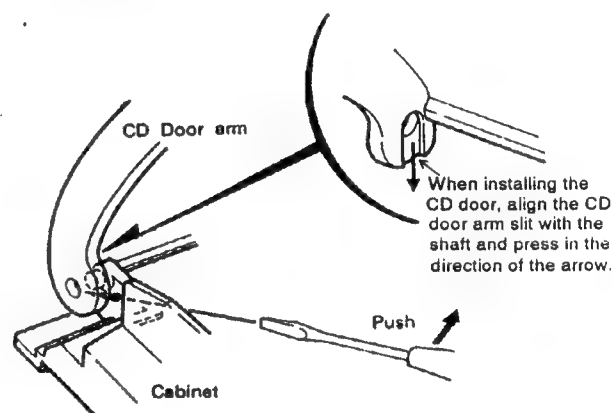
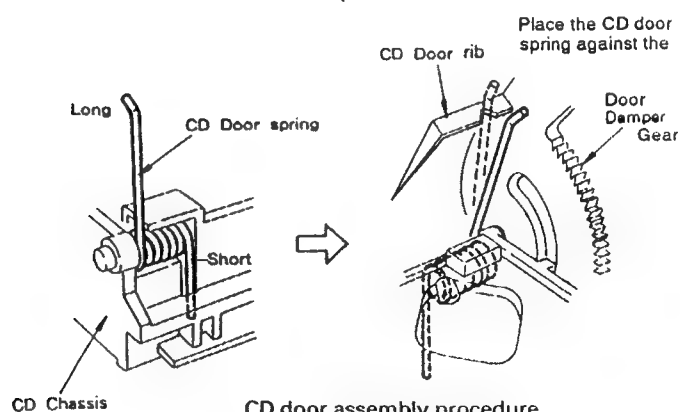


Fig. 2 - 8 - 1



#### CD door assembly procedure

1. Install the door spring.
2. Install the right side (spring side) of the door facing you.
3. align the left side slit of the door with shaft when installing the CD door. (See Fig. 2 - 8 - 1)

Fig. 2 - 8 - 2



# < Cassette Mechanism Section >

## ■ Capstan motor ass'y (See Fig. 3-18)

- 1) Remove the one screw ① retaining the motor ass'y.
- 2) Remove the two screws ② retaining the capstan motor ass'y.

## ■ R/P head section (See Fig. 3-18)

- 1) Remove the record/playback head's mounting screw ② and loosen screw ③.

## ■ E head section (See Fig. 3-18)

- 1) Remove the E Head arm stopper.

## ■ Pinch roller

- 1) Remove the pinch roller arm stopper ④.

## ■ Flywheel ass'y

- 1) Remove the poly washer ⑤ securing the capstan shaft.
- 2) Pull out the flywheel ass'y.

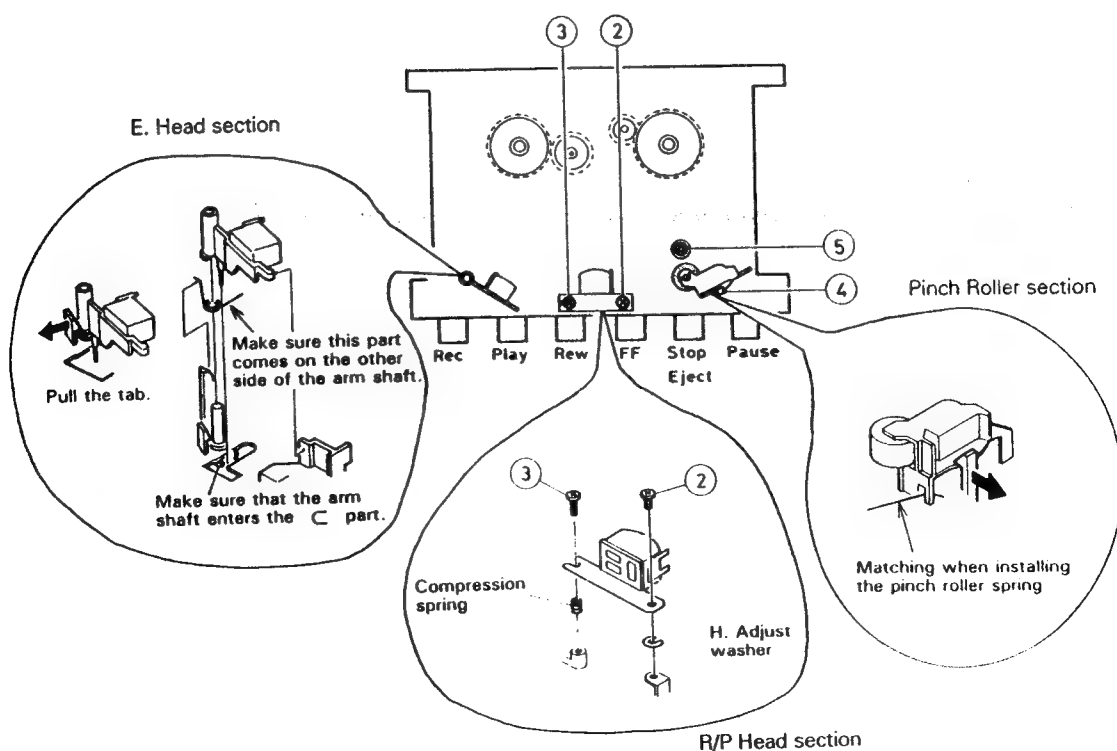
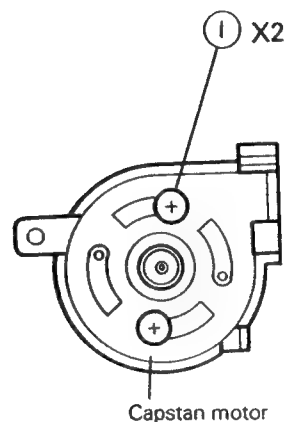
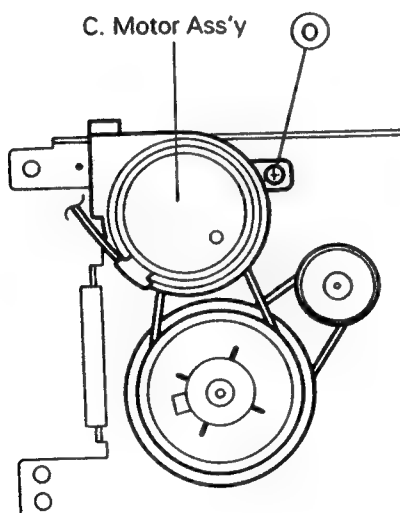


Fig. 3-18

■ Removal of the button ass'y from the mechanism chassis

- Leaf switch (See Fig. 3-19)  
Press the switch's lock panel and raise from the left to remove.
- Gear (below the flywheel) (See Fig. 3-20 and 21)  
Remove the poly washer (7) securing the gear.  
For reassembly, insert the Sensing Lever arm stand into the (A) section.
- Lock arm (See Fig. 3-20)  
Press the arm stopper from the window (8), and pull to remove.
- Chassis removal (See Fig. 3-22)
  - 1) Remove the one screw (9) retaining the rec. plate spring.
  - 2) Disengage the button springs (E).
  - 3) Remove the three springs (B), (C) and (D).
  - 4) Remove the two screws (10).
  - 5) Remove the two screws (11) securing the capstan metal.
  - 6) Gently remove the button ass'y from the chassis.

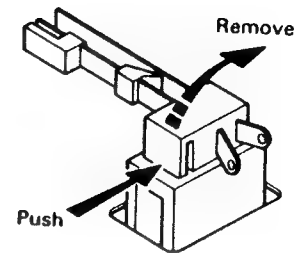


Fig. 3-19

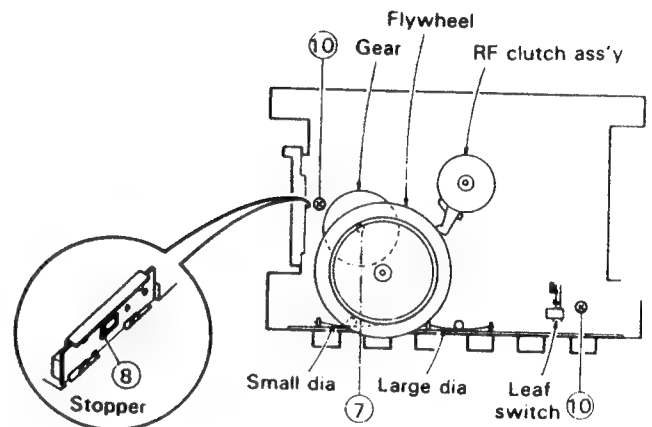


Fig. 3-20

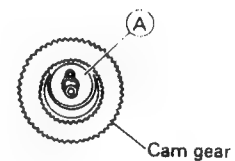


Fig. 3-21

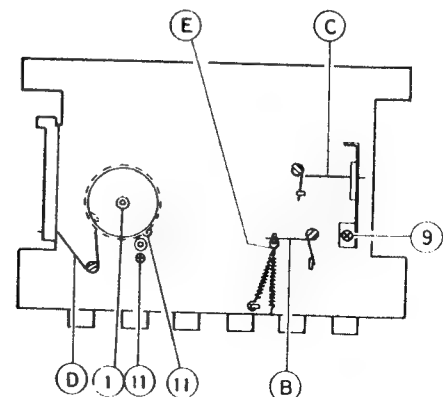
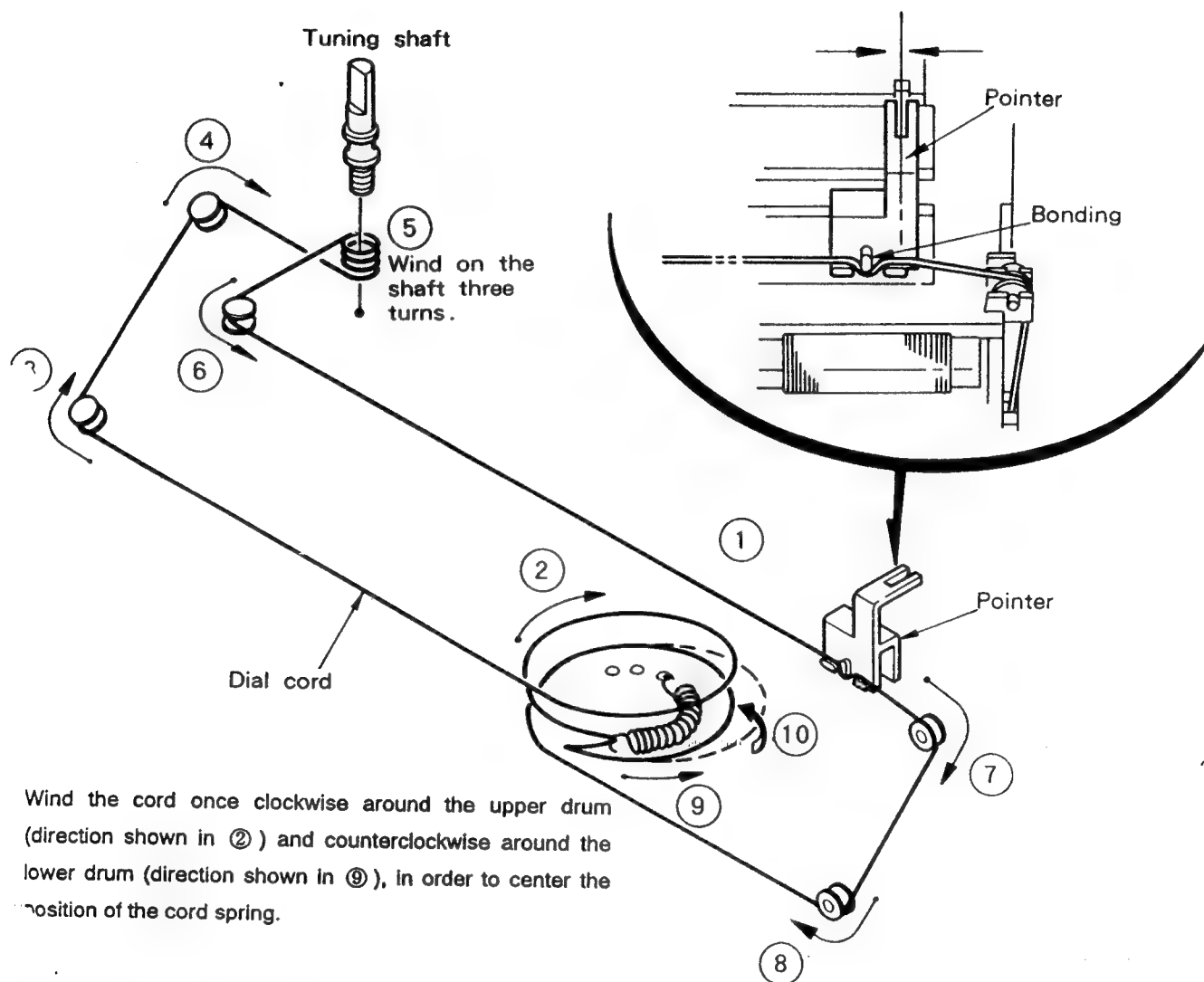


Fig. 3-22

### 3 How to Engage the Dial Cord

#### Pointer setting

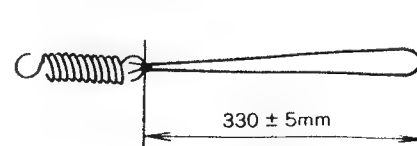
1. Turn the tuning shaft fully counterclockwise.
2. Install the pointer and align it with the slit in the chassis.
3. Bond the pointer, as shown.



Wind the cord once clockwise around the upper drum (direction shown in ②) and counterclockwise around the lower drum (direction shown in ⑨), in order to center the position of the cord spring.

#### Installation of the dial cord

1. Attach the cord to the dial drum and turn it counterclockwise.
2. Attach the spring.
3. Wind the cord around the drum once, as shown ②.
4. Then, wind the cord around the pulleys, as shown in ③ to ⑧.
5. While pulling the end of the cord, as shown in ⑨, wind the cord once around the drum.
6. Turn the tuning shaft fully counterclockwise and install the pointer.



## 4 Main Adjustment

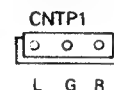
### ■ Measuring instruments required for adjustment

- Low frequency oscillator : Capable of 0 dBs output to 600  $\Omega$  at an oscillation frequency of 50 Hz – 20 kHz.
- Attenuator : Impedance of 600  $\Omega$
- Electronic voltmeter
- 600  $\Omega$  resistors : For attenuator matching
- Distortion meter
- Torque gauge : Cassette type for adjusting relation between CTG-N mechanisms
- Wow and flutter meter
- Frequency counter
- Standard tapes :
  - VTT712 ..... For measuring tape speed and wow & flutter
  - VTT724 ..... For checking the reference level of 1 kHz
  - VTT736 ..... For confirming replay frequency characteristics
  - VTT703L ..... For adjusting head angle
- Measurement tapes :
  - Normal ..... TS-8 (UR)
  - Chromium ... TS10
  - Metal ..... TS11

### ■ DECK section

#### ● Measuring conditions

- Supply voltage : 240 V AC, 50/60 Hz (B version)  
230 V AC, 50/60 Hz (E/EN/G/GI/VX version)  
12 V DC (E/EN version)
- Reference output : Speaker ..... 0 dBs (0.775 V)/3  $\Omega$   
Headphone .... 0 dBs (0.775 V)/32  $\Omega$
- Reference input level : -29 dBs at  
CNTP1 IN



( Input mode switch ..... CD position )  
( Play mode ..... Tape position )

- Volume/switch setting position :
  - Function switch ..... TAPE
  - Main volume ..... Adjust for 0 dBs
  - High Tone control ..... Maximum position
  - Beat cut switch ..... Standard (1)
- Measurement output : Speaker (CN801) or Headphone jack

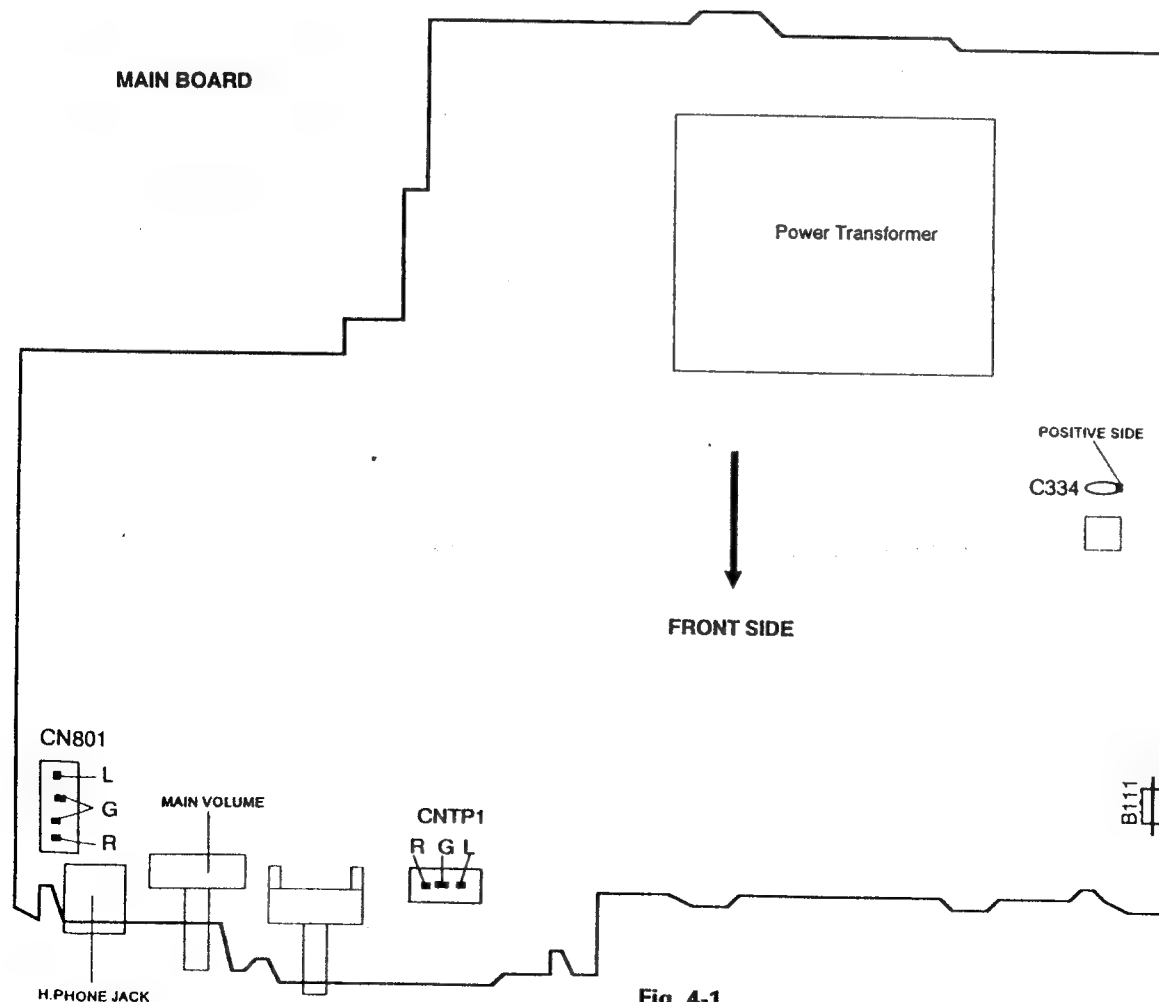
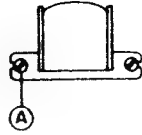
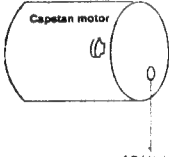



Fig. 4-1

# ■ AMPLIFIER section

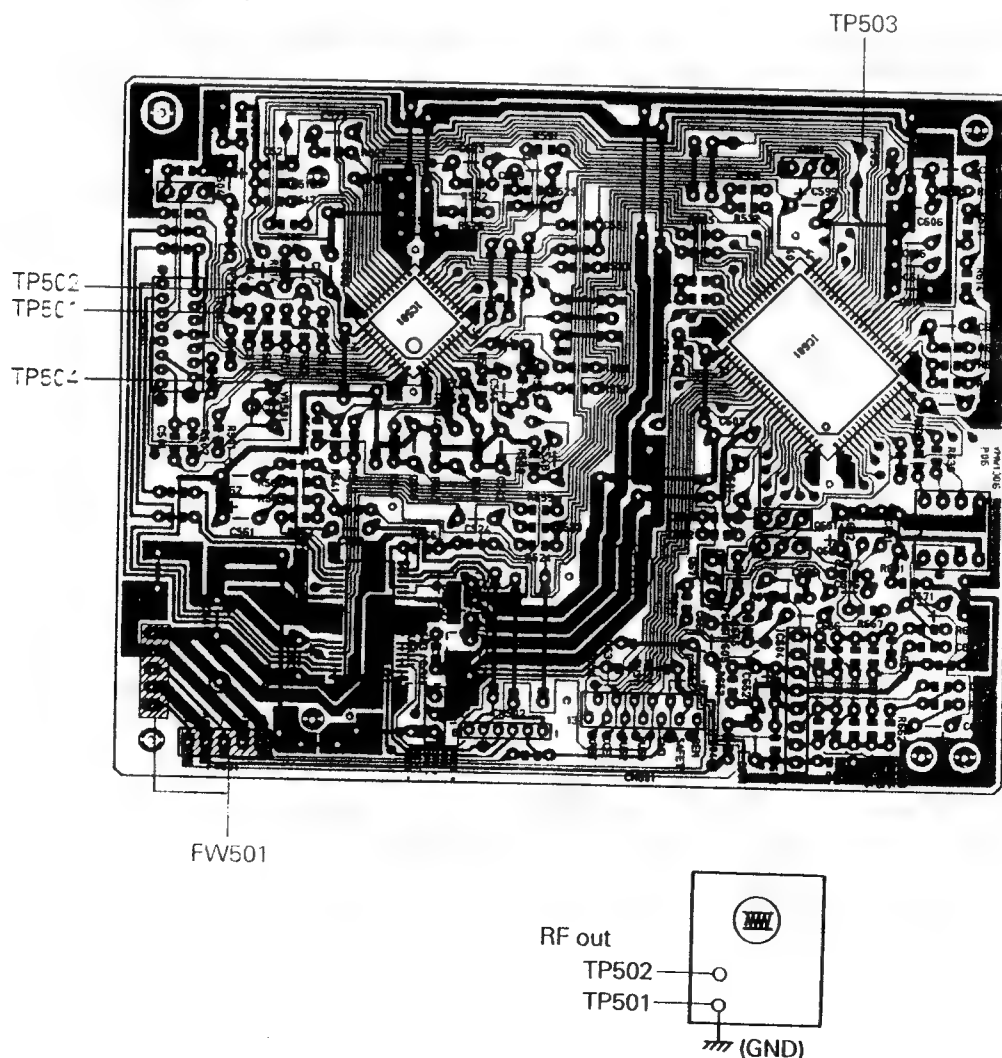
Item	Conditions	Adjustment and Confirmation Methods	Standard value	Adjusting point
Head azimuth adjustment	<ul style="list-style-type: none"> <li>• Test tape: VTT703L (10 kHz)</li> <li>• Output position: Speaker terminal (CN801) or Headphone jack</li> </ul>	Adjust the setscrew "A" to maximize output level, and to minimize phase difference between R and L channels. After adjustment, apply screw sealant to lock the setscrew.	Output level: Maximum Phase difference: Minimum	
Tape speed adjustment	<ul style="list-style-type: none"> <li>• Test tape: VTT712 (3 kHz)</li> <li>• Frequency counter</li> <li>• Output position: Speaker terminal (CN801) or Headphone jack</li> </ul>	Play back the end portion of the test tape VTT712 while confirming that the frequency counter reads 2940–3090 Hz. If not, adjust the volume built in the motor with a screwdriver (–).	3010 +80/–70 Hz	Volume built in motor 
Wow & flutter check	<ul style="list-style-type: none"> <li>• Test tape: VTT712 (3 kHz)</li> <li>• Wow &amp; flutter meter</li> <li>• Output position: Speaker terminal (CN801) or Headphone jack</li> </ul>	Play back the end portion of the test tape VTT712 while confirming that the wow & flutter meter reads 0.4 % or less (JIS unweighted).	Less than 0.4 % (JIS unweighted)	
Playback output level check	<ul style="list-style-type: none"> <li>• Test tape: VTT724 (1 kHz)</li> <li>• Output position: CN801 (Speaker terminal)</li> </ul>	Play back the test tape VTT724 while confirming that level at the speaker output is 2.3 V (1.8 W) or more as the volume is set to the maximum position. At that time, level difference between R and L channels should be less than 4 dB.	2.3 V (1.8 W) or more Level difference between R & L: Within 4 dB	
Playback frequency response check	<ul style="list-style-type: none"> <li>• Test tape: VTT736</li> <li>• Output position: CN801 (speaker terminal) or Headphone jack</li> </ul>	Play back the test tape VTT736 while confirming that deviation of 8 kHz and 125 Hz signals is respectively within the specified value as compared with the reference 1 kHz signal.	0 ± 3 dB at 125 Hz compared with 1 kHz signal as reference	
Bias oscillation frequency check	—	In the recording mode measure voltage at both the ends of C334. (Measure the voltage with a high resistance of 1 MΩ approx. to input to the voltmeter.) Check the oscillation frequency with different setting of the beat cut switch.	Beat cut switch (S331) setting: 1: 74 kHz ± 3 kHz 2: 72 kHz ± 3 kHz 3: 74 kHz ± 3 kHz	
Recording frequency response check and adjustment	<ul style="list-style-type: none"> <li>• Normal tape</li> <li>• Input position: CNTP1</li> <li>• Output position: CN801 (Speaker terminal) or Headphone jack</li> </ul>	Supply a signal that is the reference signal (–29 dBs) minus –20 dB to CNTP1 in the recording mode, and record the 1 kHz and 8 kHz signals. Play back the recorded signals while checking deviation of 8 kHz to the 1 kHz whether it meets the specifications or not. If it is out of the specifications (lower than the specified value), cut off B111 to adjust the bias current, and the level goes up by 2 dB approx.	Deviation of 8 kHz signal to 1 kHz signal is within +1 ± 4 dB.	Bus wire B111

Item	Conditions	Adjustment and Confirmation Methods	Standard value	Adjusting point
REC/PB output level check	<ul style="list-style-type: none"> <li>• Normal tape</li> <li>• Input position: CNTP1</li> <li>• Output position: CN801 (Speaker terminal) or Headphone jack</li> </ul>	Supply 1 kHz, -29 dBs (Reference signal) to CNTP1 input while confirming that REC/PB output level is $0 \pm 3$ dB compared with monitor level.	$0 \pm 3$ dB	
Erase factor check	<ul style="list-style-type: none"> <li>• Normal tape</li> <li>• Input position: CNTP1</li> <li>• Output position: CN801 (Speaker terminal) or Headphone jack</li> </ul>	Supply a 400 Hz, +10 dB reference signal to CNTP1 and record it. Erase the recording partially and play back both the erased (non-signal) portion and recording portion while confirming that difference between the recorded portion and the erased portion is more than 45 dB. (Auditory test is permitted.)	4 dB or more	
Amp. gain check	<ul style="list-style-type: none"> <li>• Input position: CNTP1</li> <li>• Output position: CN801</li> </ul>	Supply a 1 kHz, -40 dBs signal to CNTP1 while confirming that output level at CN801 (speaker terminal) is $0 \text{ dBs} \pm 3 \text{ dB}$ . (This check is just a reference after the Amp. P.C. board is repaired.)	$40 \text{ dBs} \pm 3 \text{ dB}$	

# ■ Adjustment of CD player section

Item	Required articles	Check/adjustment procedure	Adjusting point
Tracking offset adjustment	<ul style="list-style-type: none"> <li>• Normal disc</li> <li>• Oscilloscope</li> </ul>	<ol style="list-style-type: none"> <li>1. Connect an oscilloscope between TP501 (VREF) and TP503 (TE).</li> <li>2. Shortcircuit between pin ② and pin ⑤ of FW501, and supply 6 V to pin ④.</li> <li>3. Play back a normal disc.</li> <li>4. Shortcircuit between TP504 and TP501.</li> <li>5. Adjust VR501 so that DC level of tracking error signal becomes zero (observed by oscilloscope).</li> </ol> <p style="text-align: center;">Tracking offset waveform</p>  <p>Note: 1) Adjust VR501 so that the waveform is vertically symmetric with respect to the zero level. 2) Input to the oscilloscope should be DC coupling.</p>	VR501

# ■ Location of adjusting parts





### ● Maintenance of CD pickup

- To confirm the service life of laser diode
  - (1) Load the set with a disc and turn on the power switch.
  - (2) Press the PLAY button to play back the disc.
  - (3) Observe RF output with an oscilloscope. If it is 1.0 V<sub>p-p</sub> or less, clean the object lens with a cotton swab.
 Again measure RF output. If it is still under 1.0 V<sub>p-p</sub>, the laser diode maybe gets having had it. In that event, replace the pickup following the instructions.

#### • Semi-fixed resistor on the pickup board

The semi-fixed resistor on the pickup board installed on the pickup are prepared for laser power adjustment. Since this adjustment must be performed in accordance with the properties of the optical block, do not disturb this semi-fixed resistor.

When laser power is poor, it results from wear of the laser diode and it needs to replace.

If the semi-fixed resistor of the normal pickup is turned, it may be damaged by overcurrent.

#### • Grating adjustment

Grating has been adjusted well in the unit condition. If it is maladjusted, playback of CD may become impossible since laser beam traces another track.

#### • APC (automatic program control)

In the OPTIMA5, APC is prepared in the CD mechanism, however, in the OPTIMA6, an IC on the CD board functions as APC. (CD mechanism has no APC function.)

### • Pickup replacement procedure

Separate the pickup from the set to be a unit, and confirm no incoming electricity.

Detach the CD mechanism from the CD board.

Shaft and remove the pickup.

Install a new pickup and securely connect it to the connector, then reassemble the CD mechanism to the CD board.

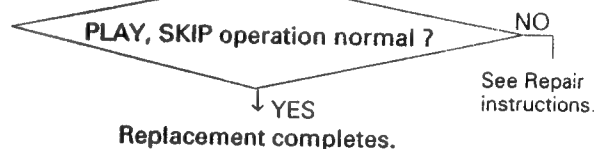
Unsolder solder bridge of the shorting land for laser protection on the soldered side of the pickup board.

Turn on the electricity without disc being loaded, and confirm that the lens vertically moves with emission of the laser. (Do not look laser beam in the eye.)

Preset VR501 for tracking adjustment to the center position.

Play back a disc to confirm that the disc normally rotates.

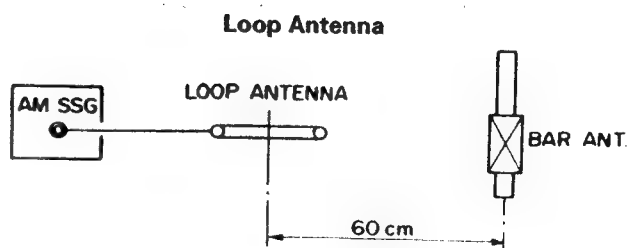
Adjust tracking offset.



### ■ TUNER section (Assembly)

#### ● Measuring conditions

- Supply voltage: 240 V AC, 50/60 Hz (B version)  
230 V AC, 50/60 Hz (E/EN/G/GI/VX ver.)
- Reference measurement output
  - Speaker : 50 mW (0.39 V/3 Ω)
  - Headphone : 0.08 V/32 Ω
- Measurement input signal
  - MW modulation frequency: 400 Hz with 30 % modulation degree/factor
  - FM modulation frequency : 400 Hz with 22.5 kHz frequency shift
- Switch/volume setting position
  - Function switch ..... RADIO
  - Mode switch ..... STEREO
  - Tone control ..... High position



● **Precautions for adjustment**

1. Apply 30 pF and 33 kΩ to the IF sweeper output circuit and 0.082 μF and 100 kΩ to the input circuit respectively in series.
2. The output of the IF sweeper should be kept at a minimum level within an adjustable range.

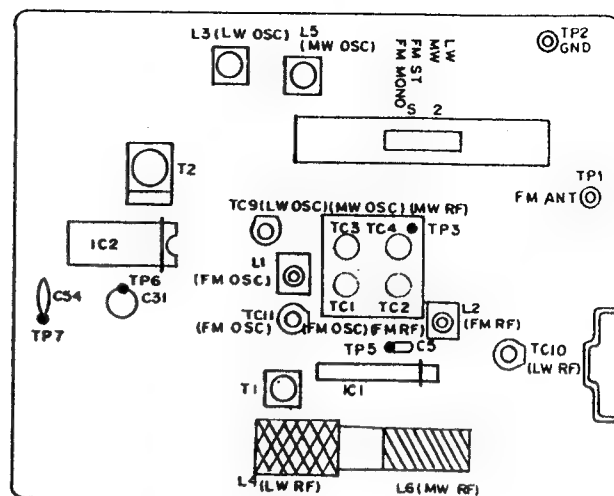
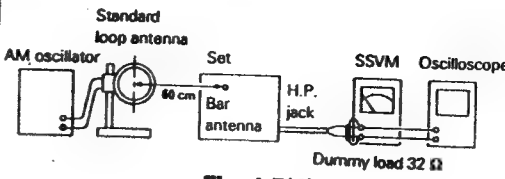
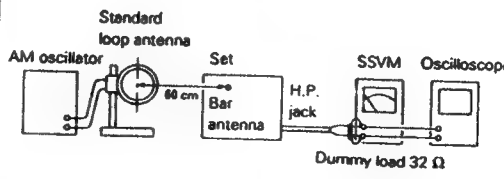
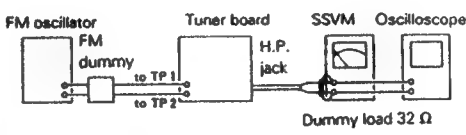


Fig. 4-2

● **Adjustment and confirmation items**

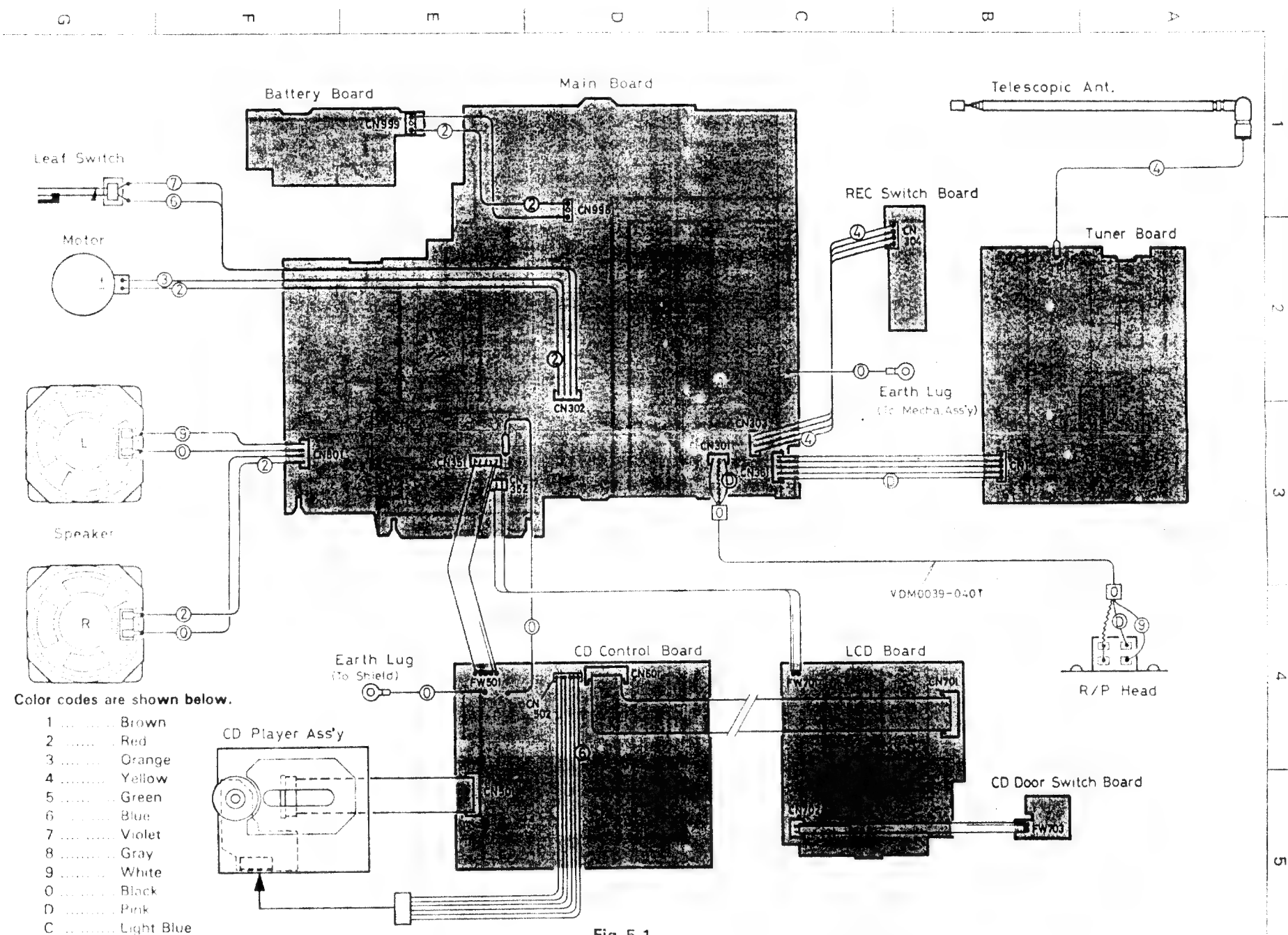
Item	Conditions	Adjustment and Confirmation Methods	Standard value	Adjusting point
Confirmation of AM IF	<ul style="list-style-type: none"> <li>• Band selection: AM</li> <li>• Receiving frequency: High position where no signal enters</li> <li>• Sound volume position: Minimum</li> <li>• Input position: TP3 (Positive side)</li> <li>• Output position: TP6 (Positive side) TP7 (Earth side)</li> </ul>	<p>Unless required due to repair, etc., AM IF should not be adjusted.</p> <p>Fig. 4-3</p> <p>As shown in Fig. A on the right, adjust AM IF so that the position around 450 kHz at the center of the peak becomes lowest or highest and indicates a symmetrical waveform.</p> <p>Fig. A</p>	450 kHz	T2
Confirmation of FM IF (continued)	<ul style="list-style-type: none"> <li>• Band selection: FM</li> <li>• Receiving frequency: High position where no signal enters.</li> <li>• Sound volume position: Minimum</li> <li>• Input position: TP5 (Positive side)</li> <li>• Output position: TP6 (Positive side) TP7 (Earth side)</li> </ul>	<p>Unless required due to repair, etc., FM IF should not be adjusted.</p> <p>Fig. 4-4</p> <ol style="list-style-type: none"> <li>1) Remove CF3 and adjust the S curve (Fig. B) to a single peak waveform as shown in Fig. C.</li> <li>2) By turning T1, adjust the waveform so that the waveform around 10.7 MHz at the center of the peak becomes lowest or highest and symmetrical.</li> <li>3) Return CF3 to its initial position and confirm that the waveform becomes as shown in Fig. B.</li> </ol> <p>Fig. B</p> <p>Fig. C</p>	10.7 MHz	T1

Item	Conditions	Adjustment and Confirmation Methods	Standard value	Adjusting point
Confirmation of MW tracking	<ul style="list-style-type: none"> <li>Band selection: MW</li> <li>Input position: Standard loop antenna</li> <li>Output position: TP6 or Headphone jack</li> </ul>	<p>Standard loop antenna</p>  <p><b>Fig. 4-5(1)</b> (B/E/EN/G/VX version)</p> <ol style="list-style-type: none"> <li>1) With 520 kHz signal input from SSG, turn the tuning knob fully counterclockwise (max. capacitance of variable capacitor) while adjusting L5 to maximize output level at TP6 or the Headphone output terminal.</li> <li>2) Next, change the SSG output frequency to 1650 kHz and turn the tuning knob fully clockwise (minimum capacitance of variable capacitor) while adjusting TC3 to maximize the output level.</li> </ol> <p>(GI version)</p> <ol style="list-style-type: none"> <li>1) With 516 kHz signal input from SSG, turn the tuning knob fully counterclockwise while adjusting L5 to maximize the output level.</li> <li>2) Next change the SSG output frequency to 1632 kHz and turn the tuning knob fully clockwise while adjusting TC3 to maximize the output level.</li> </ol> <p>(For B/E/EN/G/GI/VX version in common)</p> <ol style="list-style-type: none"> <li>3) Repeat the above steps 1) and 2) so that both the output levels become maximum.</li> <li>4) Adjust TP6 or headphone output with L6 so that the output becomes maximum when 600 kHz is received to the system from the AM oscillator.</li> <li>5) Next, adjust TP6 or headphone output with TC4 so that the output becomes maximum when 1400 kHz is received.</li> <li>6) Repeat the above steps 4) and 5) so that both the output levels become maximum.</li> </ol>	Output level: Maximum	L5  TC3  L5  TC3  L5, TC3 L6  TC4 L6, TC4
Confirmation of LW tracking	<ul style="list-style-type: none"> <li>Band selection: LW</li> <li>Input position: Standard loop antenna</li> <li>Output position: TP6 or Headphone jack</li> </ul>	<p>Standard loop antenna</p>  <p><b>Fig. 4-5(2)</b> (B/E/EN/G/VX version)</p> <ol style="list-style-type: none"> <li>1) With 145 kHz signal input from SSG, turn the tuning knob fully counterclockwise (max. capacitance of variable capacitor) while adjusting L3 to maximize output level at TP6 or the Headphone output terminal.</li> <li>2) Next, change the SSG output frequency to 290 kHz and turn the tuning knob fully clockwise (minimum capacitance of variable capacitor) while adjusting TC9 to maximize the output level.</li> </ol>	Output level: Maximum	L3  TC9

Item	Conditions	Adjustment and Confirmation Methods	Standard value	Adjusting point
		3) Repeat the above steps 1) and 2) so that both the output levels become maximum. 4) Adjust TP6 or headphone output with L4 so that the output becomes maximum when 145 kHz is received to the system from the AM oscillator. 5) Next, adjust TP6 or headphone output with TC10 so that the output becomes maximum when 290 kHz is received. 6) Repeat the above steps 4) and 5) so that both the output levels become maximum.  (GI version) 1) With 138 kHz signal input from SSG, turn the tuning knob fully counterclockwise while adjusting L3 to maximize the output level. 2) Next change the SSG output frequency to 293 kHz and turn the tuning knob fully clockwise while adjusting TC9 to maximize the output level. 3) Repeat the above steps 1) and 2) so that both the output levels become maximum. 4) Adjust TP6 or headphone output with L4 so that the output becomes maximum when 138 kHz is received to the system from the AM oscillator. 5) Next, adjust TP6 or headphone output with TC10 so that the output becomes maximum when 293 kHz is received. 6) Repeat the above steps 4) and 5) so that both the output levels become maximum.		L3, TC9  L4  TC10  L4, TC10  L3  TC9  L3, TC9  L4  TC10  L4, TC10
Adjustment of FM tracking	<ul style="list-style-type: none"> <li>Band selection: FM</li> <li>Input position: TP1 (Positive side) TP2 (Earth side) 75 <math>\Omega</math> unbalanced</li> <li>Output position: TP6 or Headphone jack</li> </ul>	 <p style="text-align: center;">Fig. 4-6</p> <p>(B/E/EN version)</p> 1) With 87.5 MHz FM signal input from SSG, turn the tuning knob fully counterclockwise (maximum capacitance of variable capacitor) while adjusting L1 to maximize output level at TP6 or the headphone output terminal. 2) Change the SSG FM output frequency to 109 MHz and turn the tuning knob fully clockwise (minimum capacitance of variable capacitor) while adjusting TC1 and TC11 to maximize output level at TP6 or the headphone output terminal. 3) Repeat the above steps 1) and 2) so that both the output levels become maximum. 4) Adjust TP6 or headphone output with L2 so that the output becomes maximum when 90.0 MHz is received to the system from the FM oscillator. 5) Adjust TP6 or headphone output with TC2 so that the output becomes maximum when 106 MHz is received to the system from the FM oscillator. 6) Repeat the above steps 4) and 5) so that both the output levels become maximum.	Output level: Maximum	L1  TC1, TC11  L1, TC, TC11  L2  TC2  L2, TC2

Item	Conditions	Adjustment and Confirmation Methods	Standard value	Adjusting point
		<b>(GI version)</b> 1) With 87.35 MHz FM signal input from SSG, turn the tuning knob fully counterclockwise while adjusting L1 to maximize output level at TP6 or the headphone output terminal. 2) Change the SSG FM output frequency to 108.3 MHz and turn the tuning knob fully clockwise while adjusting TC1 and TC11 to maximize output level at TP6 or the headphone output terminal. 3) Repeat the above steps 1) and 2) so that both the output levels become maximum. 4) Adjust TP6 or headphone output with L2 so that the output becomes maximum when 90.0 MHz is received to the system from the FM oscillator. 5) Adjust TP6 or headphone output with TC2 so that the output becomes maximum when 106 MHz is received to the system from the FM oscillator. 6) Repeat the above steps 4) and 5) so that both the output levels become maximum.		L1  TC1, TC11  L1, TC1, TC11  L2  TC2  L2, TC2
Adjustment of FM tracking (continued)	<ul style="list-style-type: none"> <li>Band selection: FM</li> <li>Input position: TP1 (Positive side) TP2 (Earth side) 75 <math>\Omega</math> unbalanced</li> <li>Output position: TP6 or Headphone jack</li> </ul>	<b>(VX version)</b> 1) With 64 MHz FM signal input from SSG, turn the tuning knob fully counterclockwise (maximum capacitance of variable capacitor) while adjusting L1 to maximize output level at TP6 or the headphone output terminal. 2) Change the SSG FM output frequency to 109 MHz and turn the tuning knob fully clockwise (minimum capacitance of variable capacitor) while adjusting TC1 and TC11 to maximize output level at TP6 or the headphone output terminal. 3) Repeat the above steps 1) and 2) so that both the output levels become maximum. 4) Adjust TP6 or headphone output with L2 so that the output becomes maximum when 65 MHz is received to the system from the FM oscillator. 5) Adjust TP6 or headphone output with TC2 so that the output becomes maximum when 100 MHz is received to the system from the FM oscillator. 6) Repeat the above steps 4) and 5) so that both the output levels become maximum.	Output level: Maximum	L1  TC1, TC11  L1, TC, TC11  L2  TC2  L2, TC2
Adjustment of FM MPX	<ul style="list-style-type: none"> <li>Input position: TP1 (Positive side) TP2 (Earth side)</li> <li>100 k<math>\Omega</math> resistance should be inserted between the set and frequency counter in series.</li> </ul>	Confirm that the action and separation of the stereo system meet the standard values when 98 MHz (1 kHz modulation, 75 kHz deviation and 60 dB stereo modulation) is received.	—	—

# 5 Wiring Connections



## 6 Block Diagram

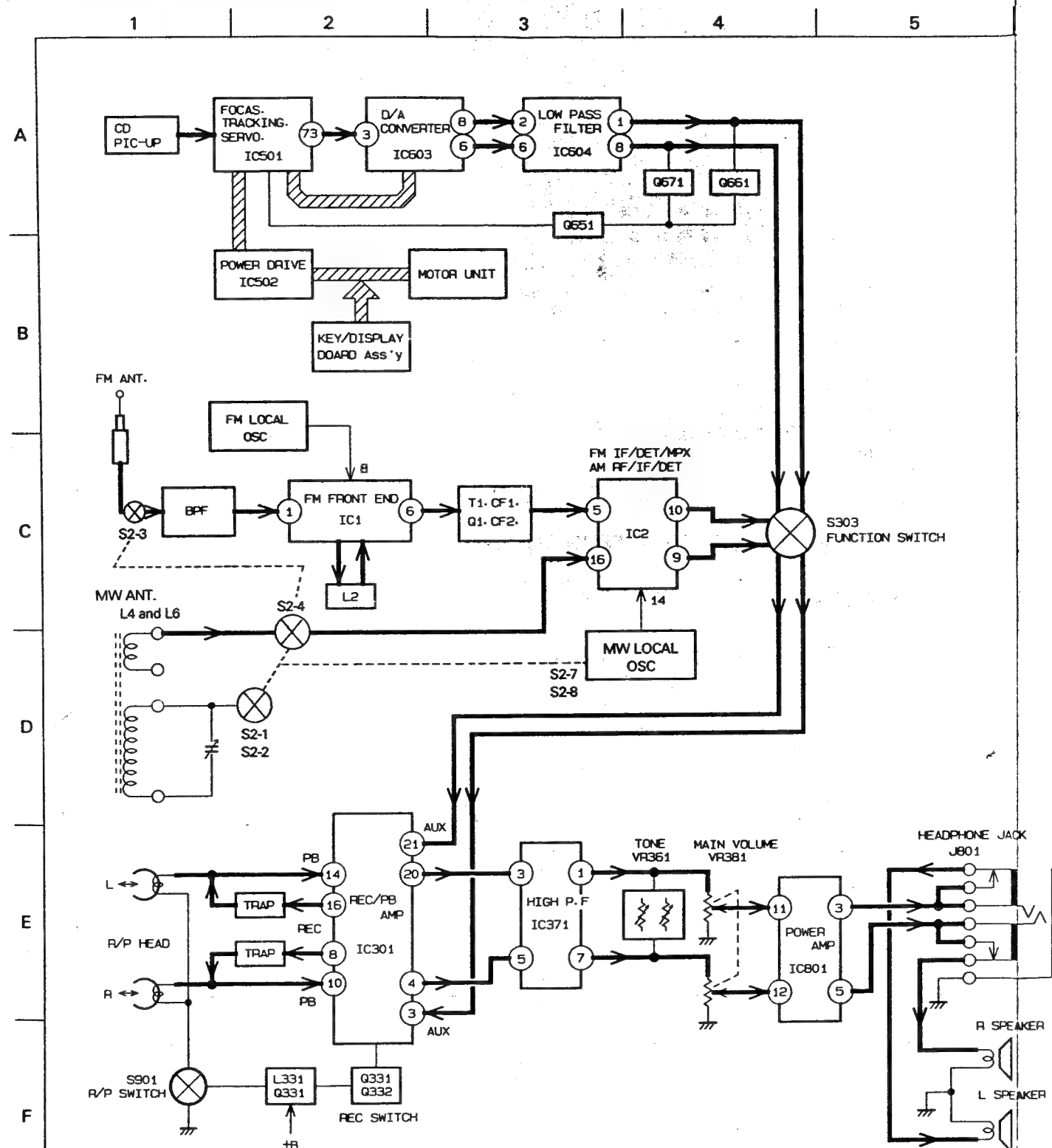


Fig. 6-1

## 7 Standard Schematic Diagram

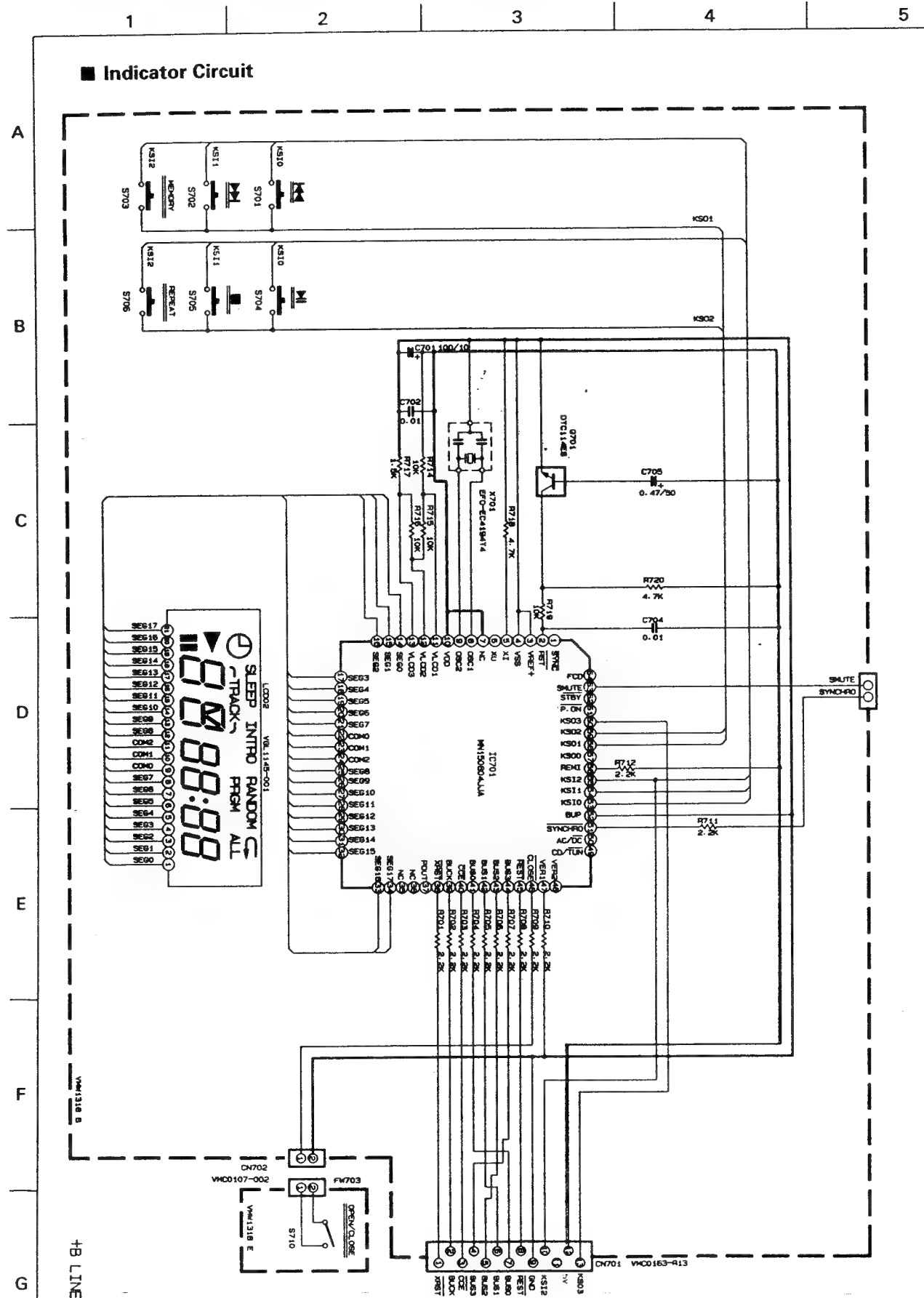
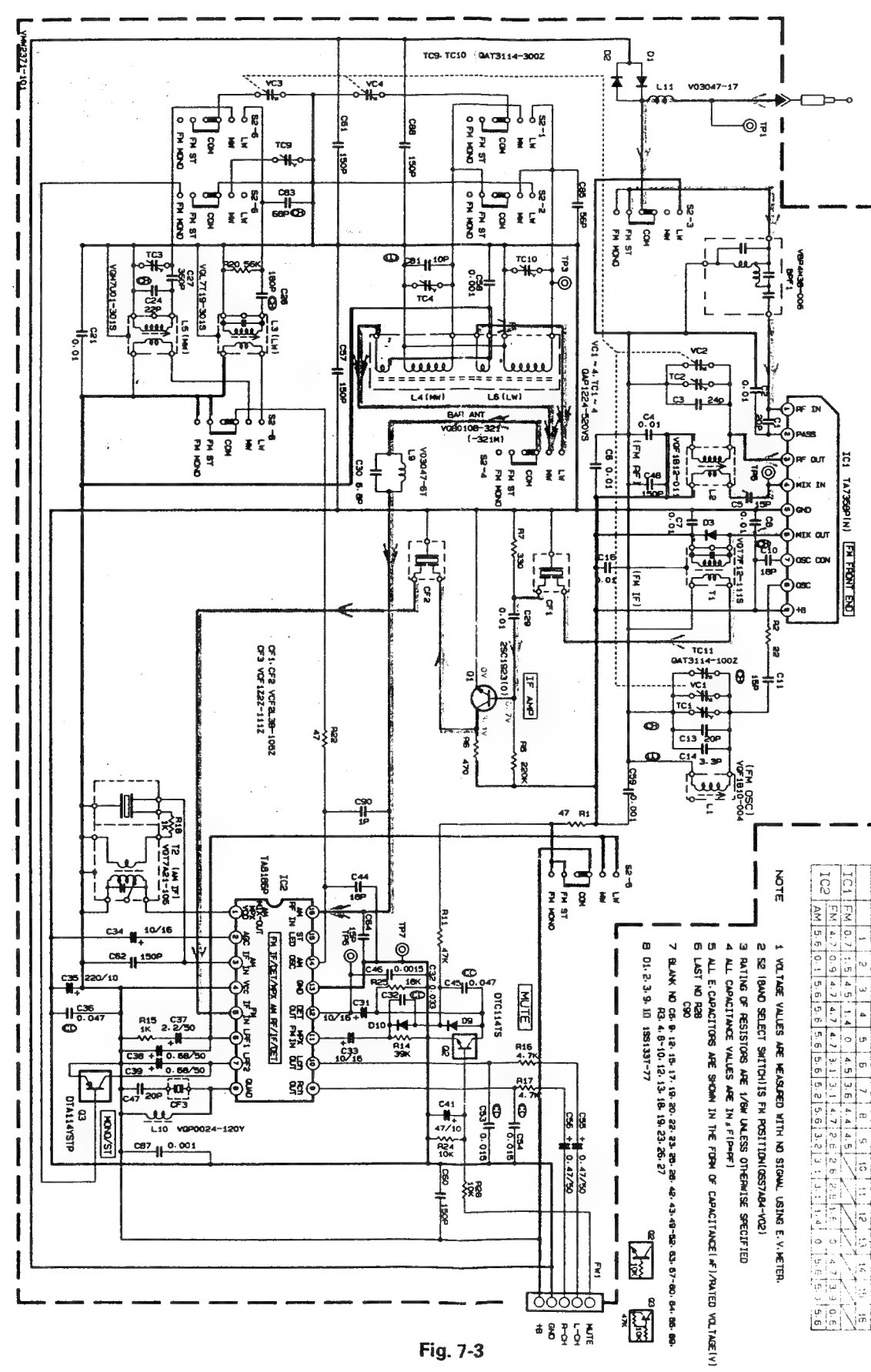


Fig. 7-1

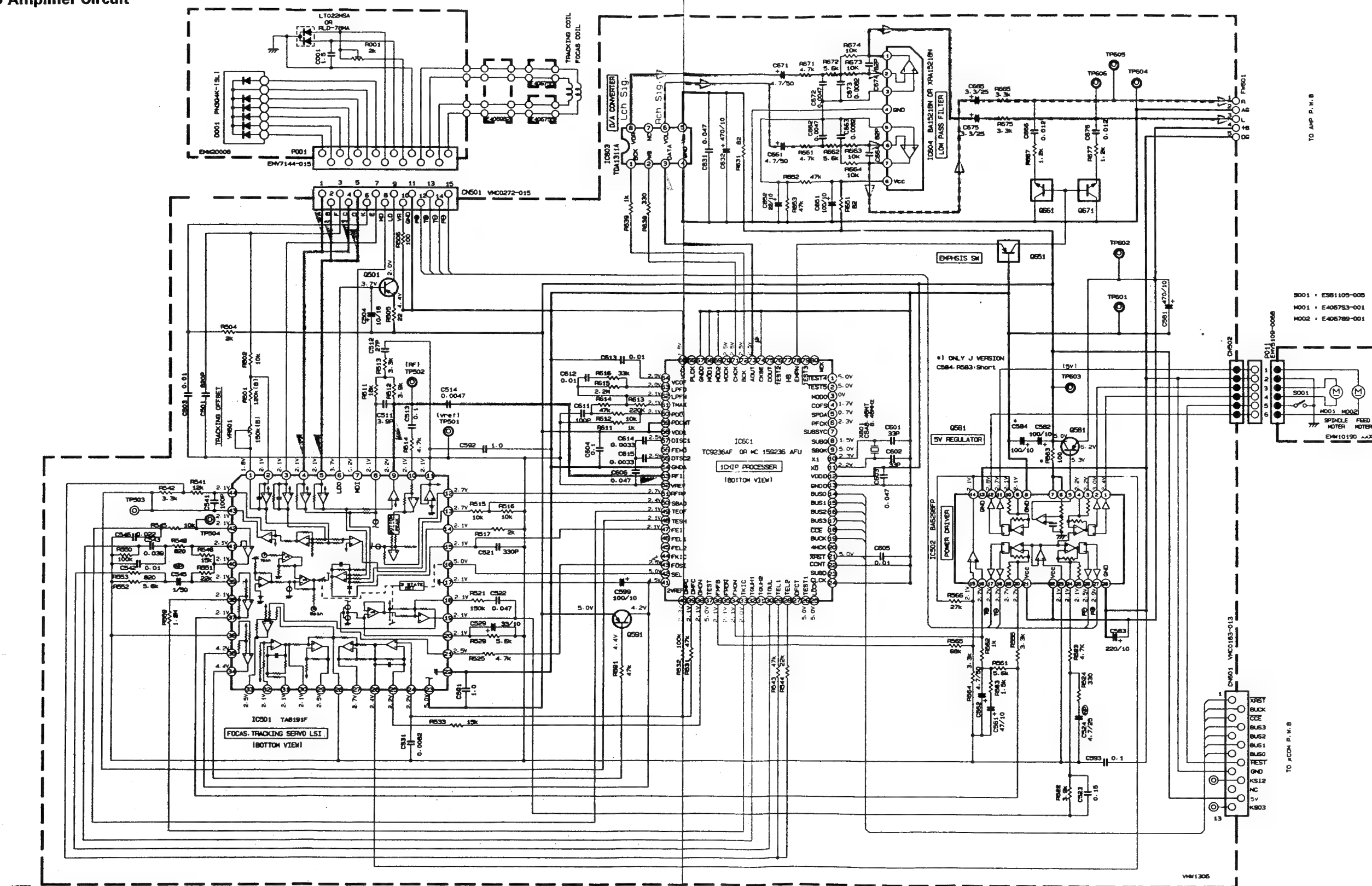


**(GI version)**



**Fig. 7-3**

## ■ CD Amplifier Circuit



- NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER IN PLAYBACK.
  2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/4W 5% CARBON RESISTOR.
- ALL RESISTANCE VALUES ARE IN OHMS (Ω).  
 ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.  
 ALL CAPACITANCE VALUES ARE IN μF (μF).  
 ALL INDUCTANCE VALUES ARE IN mH (mH).  
 ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
- ① UNPLANNABLE CARBON RESISTOR  
 ② METAL FILM RESISTOR  
 ③ OXIDE METAL FILM RESISTOR  
 ④ 2.25V LOW LEAK CURRENT ELECTROLYTIC CAPACITOR  
 ⑤ NON-POLARIZED ELECTROLYTIC CAPACITOR  
 ⑥ POLYPROPYLENE CAPACITOR  
 ⑦ POLYSTYRENE CAPACITOR

Q601	2SA852(L-K)
Q602	2SA1309(R-S) OR 2SA1175(HFE) OR 2SA8336(RS)
Q603	2SA1115 OR DTA1147S
Q604	2SA1115 OR DTA1147S
Q605	2SA1115 OR DTA1147S

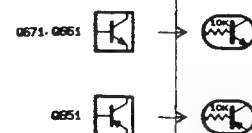
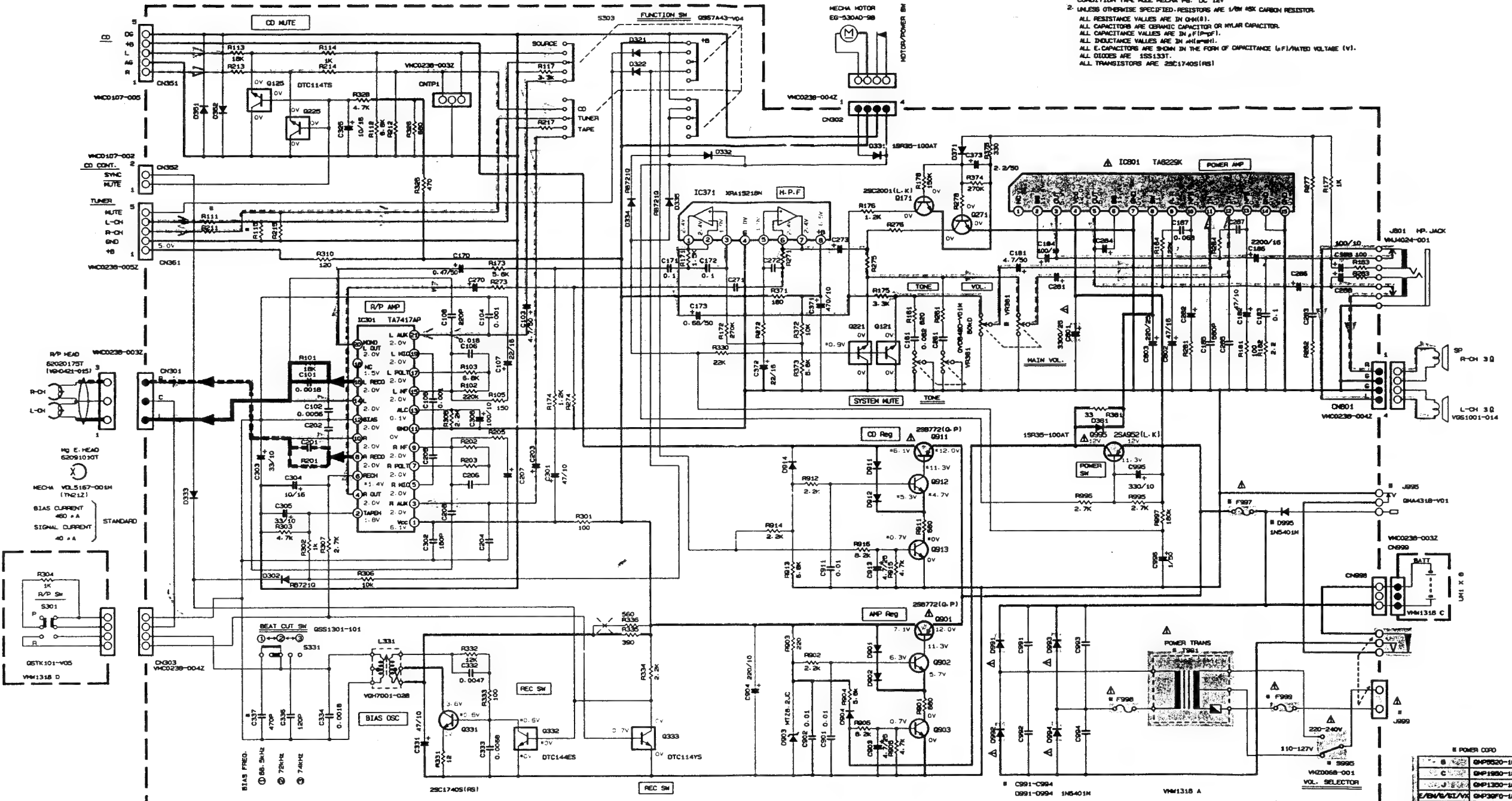


Fig. 7-4

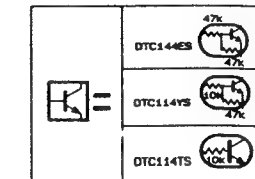
# Amplifier Circuit

NOTES 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.  
 2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/8W 5% CARBON RESISTOR.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL CAPACITANCE VALUES ARE IN P.F.  
 ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.  
 ALL INDUCTANCE VALUES ARE IN MH.  
 ALL E-CAPACITORS ARE 50V IN THE FORM OF CAPACITANCE (P.F./RATED VOLTAGE (V)).  
 ALL DIODES ARE 1SS133T.  
 ALL TRANSISTORS ARE 2SC1740S(RS).



\* MARK REF. NO PARTS

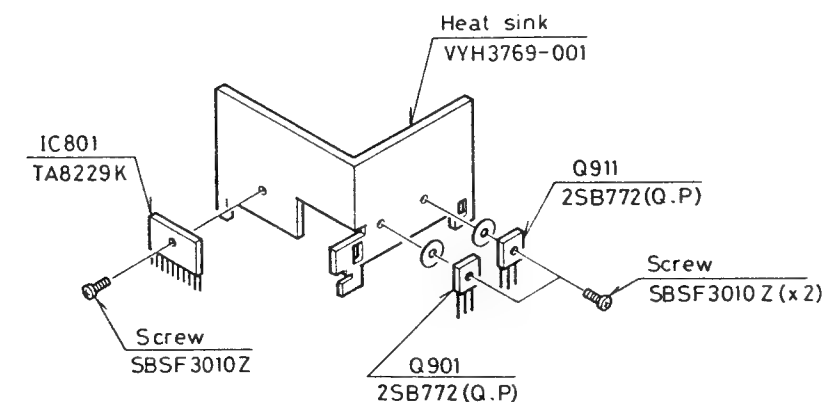
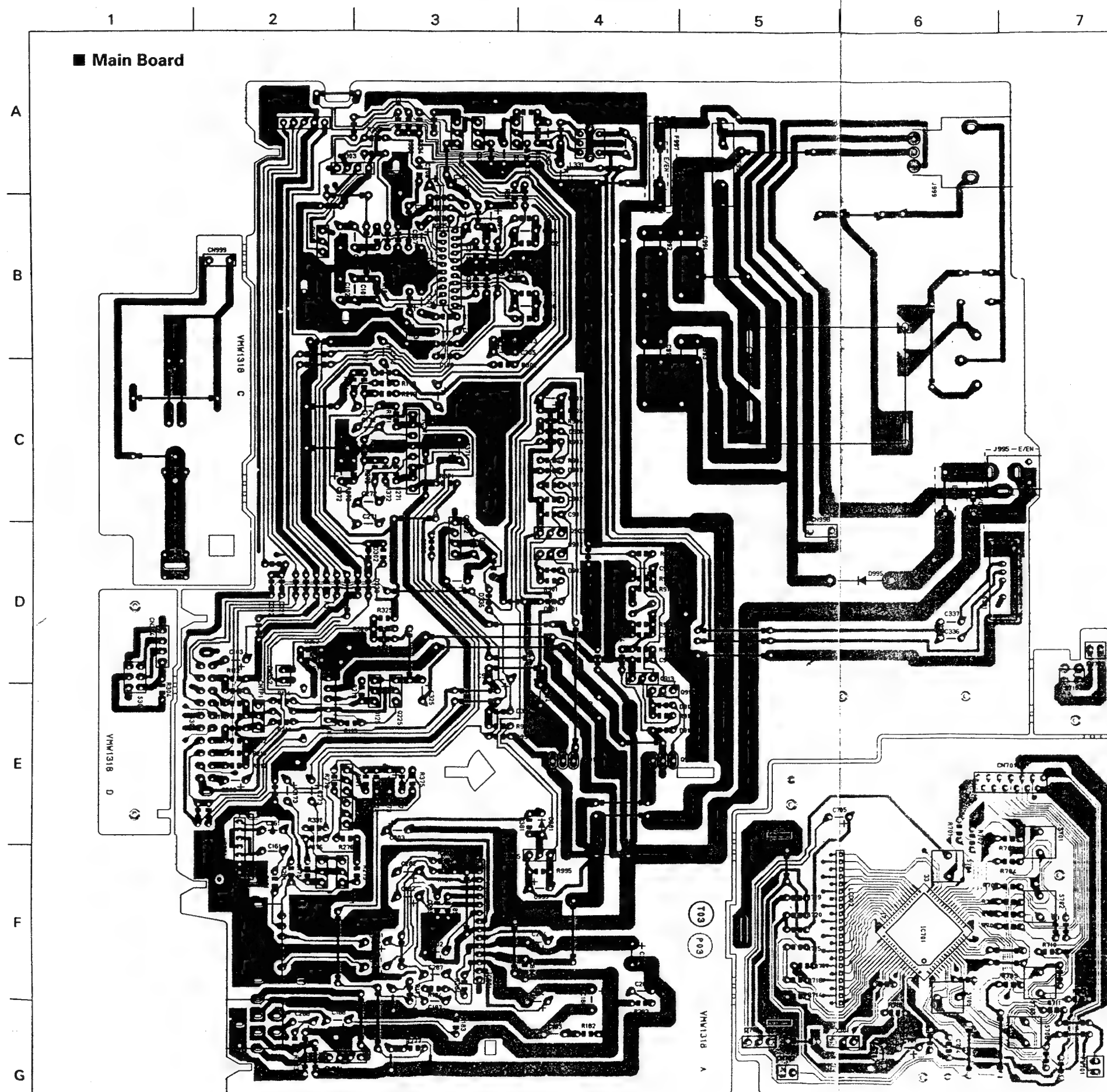
LOCATION	J-15	K-17	K-15	H-15	K-18	H-18	H-17	K-14	K-17	F-13	K-4	E-3	E-4
1	VT57P2-121B5	BUS	QHF51E2-3R1J1B5	T 3.15A	BUS	QHF51E2-3R1J1B5	3A/250V	QHF51E2-3R1J1B5	3A/250V	QHF51E2-3R1J1B5	3A/250V	QHF51E2-3R1J1B5	3A/250V
2	VT57P2-121J	QHF51E2-3R1J1	400MA/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V
3	VT57P2-121J	QHF51E2-3R1J1	400MA/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V	QHF51E2-3R1J1	3A/250V
4	VT57P2-121J	BUS	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1
5	VT57P2-121K	QHF51E2-3R1J1	500MA/250V	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A
6	VT57P2-121	BUS	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1
7	VT57P2-121	BUS	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1	T 3.15A	QHF51E2-3R1J1



L Tape playback signal line  
 R Radio signal line  
 L CD Signal line  
 L Recording signal line  
 +B LINE

Fig. 7-5

## 8 Location of P.C. Board Parts and Parts List



### ● Main Board Parts List

BLOCK NO. 001				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 101	QFLC1HJ-152ZM	M CAPACITOR	1500PF 5% 50V	
C 102	QFLC1HJ-562ZM	M CAPACITOR	5600PF 5% 50V	
C 103	QETC1HM-475ZN	E CAPACITOR	4.7MF 20% 50V	
C 104	QCY41HK-102	C CAPACITOR	1000PF 10% 50V	
C 105	QCB81HK-102Y	C CAPACITOR	1000PF 10% 50V	
C 106	QFLC1HJ-183ZM	TF CAPACITOR	.018MF 5% 50V	
C 107	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
C 108	QCB81HK-221Y	C CAPACITOR	220PF 10% 50V	
C 161	QFLC1HJ-823ZM	M CAPACITOR	.082MF 5% 50V	
C 170	QETC1HM-474ZN	E CAPACITOR	.47MF 20% 50V	
C 171	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
C 172	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
C 173	QETC1HM-684ZN	E CAPACITOR	.68MF 20% 50V	
C 181	QETC1HM-475ZN	E CAPACITOR	4.7MF 20% 50V	
C 182	QETC1AM-476Z	E CAPACITOR	47MF 20% 10V	
C 183	QCC11EM-104V	C CAPACITOR	.10MF 20% 25V	
C 184	QETC1AM-107ZN	E CAPACITOR	100MF 20% 10V	
C 185	QCB81HK-561Y	C CAPACITOR	560PF 10% 50V	
C 186	QETB1CM-228N	E CAPACITOR	2200MF 20% 16V	
C 187	QFLC1HJ-683ZM	M CAPACITOR	.068MF 5% 50V	
C 188	QETC1AM-107ZN	E CAPACITOR	100MF 20% 10V	
C 201	QFLC1HJ-152ZM	M CAPACITOR	1500PF 5% 50V	
C 202	QFLC1HJ-562ZM	M CAPACITOR	5600PF 5% 50V	
C 203	QETC1HM-475ZN	E CAPACITOR	4.7MF 20% 50V	
C 204	QCY41HK-102	C CAPACITOR	1000PF 10% 50V	
C 205	QCB81HK-102Y	C CAPACITOR	1000PF 10% 50V	
C 206	QFLC1HJ-183ZM	TF CAPACITOR	.018MF 5% 50V	
C 207	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
C 208	QCB81HK-221Y	C CAPACITOR	220PF 10% 50V	
C 261	QFLC1HJ-823ZM	M CAPACITOR	.082MF 5% 50V	
C 270	QETC1HM-474ZN	E CAPACITOR	.47MF 20% 50V	
C 271	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
C 272	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
C 273	QETC1HM-684ZN	E CAPACITOR	.68MF 20% 50V	
C 281	QETC1HM-475ZN	E CAPACITOR	4.7MF 20% 50V	
C 282	QETC1AM-476Z	E CAPACITOR	47MF 20% 10V	
C 283	QCC11EM-104V	C CAPACITOR	.10MF 20% 25V	
C 284	QETC1AM-107ZN	E CAPACITOR	100MF 20% 10V	
C 285	QCB81HK-561Y	C CAPACITOR	560PF 10% 50V	
C 286	QETB1CM-228N	E CAPACITOR	2200MF 20% 16V	
C 287	QFLC1HJ-683ZM	M CAPACITOR	.068MF 5% 50V	
C 288	QETC1AM-107ZN	E CAPACITOR	100MF 20% 10V	
C 301	QETC1AM-476Z	E CAPACITOR	47MF 20% 10V	
C 302	QCB81HK-151Y	C CAPACITOR	150PF 10% 50V	
C 303	QETC1AM-336ZN	E CAPACITOR	33MF 20% 10V	
C 304	QETC1CM-106ZN	E CAPACITOR	10MF 20% 16V	
C 305	QETC1AM-336ZN	E CAPACITOR	33MF 20% 10V	
C 306	QETC1AM-107ZN	E CAPACITOR	100MF 20% 10V	
C 325	QETC1CM-106ZN	E CAPACITOR	10MF 20% 16V	
C 331	QETC1AM-476Z	E CAPACITOR	47MF 20% 10V	
C 332	QCY41HK-472	C CAPACITOR	4700PF 10% 50V	
C 333	QCY41HK-682	C CAPACITOR	6800PF 10% 50V	
C 334	QFLC1HJ-182ZM	M CAPACITOR	1800PF 5% 50V	
C 336	QCS31HJ-121Z	C CAPACITOR	120PF 5% 50V	
C 337	QCS11HJ-471	C CAPACITOR	470PF 5% 50V	

Fig. 8-1



BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 371	QETC1AM-4772N	E CAPACITOR	470MF 20X 10V		
C 372	QETC1CM-2262N	E CAPACITOR	22MF 20X 16V		
C 373	QETC1HM-2252N	E CAPACITOR	2.2MF 20X 50V		
C 701	QEK61AM-107Z	E CAPACITOR	100MF 20X 10V		
C 702	QCC11EM-103V	C CAPACITOR	.010MF 20X 25V		
C 704	QCVB1CM-103Y	C CAPACITOR	.010MF 20X 16V		
C 705	QEK41HM-474	E CAPACITOR	.47MF 20X 50V		
C 801	QETB1EM-338N	E CAPACITOR	3300MF 20X 25V		
C 802	QETC1CM-476Z	E CAPACITOR	47MF 20X 16V		
C 803	QETC1EM-2272N	E CAPACITOR	220MF 20X 25V		
C 804	QCB81HK-471Y	C CAPACITOR	470PF 10X 50V		
C 808	QCS11HJ-151	C CAPACITOR	150PF 5X 50V		
E 901	QCVB1CM-103Y	C CAPACITOR	.010MF 30X 16V		
C 902	QCVB1CM-103Y	C CAPACITOR	.010MF 30X 16V		
C 903	QETC1EM-4752M	E CAPACITOR	4.7MF 20X 25V		
C 904	QETC1AM-2272N	E CAPACITOR	220MF 20X 10V		
C 911	QCVB1CM-103Y	C CAPACITOR	.010MF 30X 16V		
C 913	QETC1EM-4752M	E CAPACITOR	4.7MF 20X 25V		
C 991	QFLC1HJ-1042M	M CAPACITOR	.10MF 5X 50V		
C 992	QFLC1HJ-1042M	M CAPACITOR	.10MF 5X 50V		
C 993	QFLC1HJ-1042M	M CAPACITOR	.10MF 5X 50V		
C 994	QFLC1HJ-1042M	M CAPACITOR	.10MF 5X 50V		
C 995	QETC1AM-3372N	E CAPACITOR	330MF 20X 10V		
C 996	QETC1HM-105Z	E CAPACITOR	1.0MF 20X 50V		
CNTP1	TTL25V-003	CONNECTOR	TEST POINT		
CN301	TTL25V-003	CONNECTOR	HEAD WIRE		
CN302	VMC0238-004Z	CONNECTOR	MOTOR		
CN303	VMC0238-004Z	CONNECTOR			
CN351	VMC0107-005	CONNECTOR	CD		
CN352	VMC0107-002	CONNECTOR	CD CONT		
CN361	VMC0238-005Z	CONNECTOR	TUNER		
CN701	VMC0163-R13	CONNECTOR	FROM CD		
CN702	VMC0107-002	CONNECTOR			
CN801	VMC0238-004Z	CONNECTOR	SPEAKER		
CN999	TTL25V-003	CONNECTOR			
D 302	RB721Q	S.B.DIODE			
D 321	1SS133	DIODE			
D 322	1SS133	DIODE			
D 331	1SR35-100A	SI DIODE			
D 332	1SS133	DIODE			
D 333	1SS133	DIODE			
D 334	RB721Q	S.B.DIODE			
D 335	RB721Q	S.B.DIODE			
D 351	1SS133	DIODE			
D 352	1SS133	DIODE			
D 371	1SS133	DIODE			
D 381	1SR35-100A	SI DIODE			
D 901	1SS133	DIODE			
D 902	1SS133	DIODE			
D 903	MTZ6.2JC	ZENER DIODE			
D 904	1SS133	DIODE			
D 911	1SS133	DIODE			
D 912	1SS133	DIODE			
D 914	1SS133	DIODE			
D 991	1N5401M	DIODE			

BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
D 992	1N5401M	DIODE			
D 993	1N5401M	DIODE			
D 994	1N5401M	DIODE			
D995	1N5401M	SI DIODE			E,EN
F CLP	VMZ0125-001Z	FUSE CLIP	FOR F997		E,EN
F CLP	VMZ0125-001Z	FUSE CLIP	FOR F998		
F LAB	VND4033-053	FUSE LABEL	FOR F997		E,EN
F 997	QMF51E2-3R15J1	FUSE			E,EN
F 998	QMF51E2-3R1J1B5	FUSE			B
F 998	QMF51E2-3R15J1	FUSE			E,EN,VX,GI,G
F LAB	VND4033-053	FUSE LABEL	FOR F998		
IC301	TA7417AP	IC	(EQ&REC AMP)		
IC371	8A15218N	IC	(OP AMP)		
IC701	MN150804JJA-1	IC	CD CPU		
IC801	TA8229K	IC	(POWER AMP)		
J 801	VMJ4024-001	JACK	HP JACK		
J 995	QMA431B-V01	DC JACK			E,EN
J 999	QMC0263-004	AC SOCKET			E,EN,G,GI,VX
J 999	QMC0263-004BS	AC SOCKET			B
L 331	VQH7001-028	OSC COIL(BIAS)			
LC002	VGL1145-001	LCD			
Q 121	DTC114TS	TRANSISTOR			
Q 125	DTC114TS	TRANSISTOR			
Q 171	2SC2001(L,K)	TRANSISTOR			
Q 221	DTC114TS	TRANSISTOR			
Q 225	DTC114TS	TRANSISTOR			
Q 271	2SC2001(L,K)	TRANSISTOR			
Q 331	2SC1740S(R,S)	TRANSISTOR			
Q 332	DTC144ES	TRANSISTOR			
Q 333	DTC114YS	TRANSISTOR			
Q 701	DTC114ES	DIGI. TRANSISTOR			
Q 901	2SB772(Q,P)	TRANSISTOR	8V REG		
Q 902	2SC1740S(R,S)	TRANSISTOR			
Q 903	2SC1740S(R,S)	TRANSISTOR			
Q 911	2SB772(Q,P)	TRANSISTOR			
Q 912	2SC1740S(R,S)	TRANSISTOR			
Q 913	2SC1740S(R,S)	TRANSISTOR			
Q 995	2SA952(L,K)	TRANSISTOR			
R 101	QRD161J-183	CARBON RESISTOR	18K 5X 1/6W		
R 102	QRD161J-224	CARBON RESISTOR	220K 5X 1/6W		
R 103	QRD167J-682	CARBON RESISTOR	6.8K 5X 1/6W		
R 105	QRD161J-151	CARBON RESISTOR	150 5X 1/6W		
R 112	QRD167J-682	CARBON RESISTOR	6.8K 5X 1/6W		
R 113	QRD161J-183	CARBON RESISTOR	18K 5X 1/6W		
R 114	QRD161J-102	CARBON RESISTOR	1.0K 5X 1/6W		
R 115	QRD167J-562	CARBON RESISTOR	5.6K 5X 1/6W		
R 117	QRD167J-332	CARBON RESISTOR	3.3K 5X 1/6W		
R 161	QRD161J-821	CARBON RESISTOR	820 5X 1/6W		
R 171	QRD161J-152	CARBON RESISTOR	1.5K 5X 1/6W		
R 172	QRD161J-274	CARBON RESISTOR	270K 5X 1/6W		
R 173	QRD167J-562	CARBON RESISTOR	5.6K 5X 1/6W		
R 174	QRD161J-122	CARBON RESISTOR	1.2K 5X 1/6W		
R 175	QRD167J-332	CARBON RESISTOR	3.3K 5X 1/6W		
R 176	QRD161J-122	CARBON RESISTOR	1.2K 5X 1/6W		
R 177	QRD161J-102	CARBON RESISTOR	1.0K 5X 1/6W		

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 178	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
R 181	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 182	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 183	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 184	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 201	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R 202	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 203	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R 205	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
R 212	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R 213	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R 214	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 215	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 217	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 261	QRD161J-821	CARBON RESISTOR	820 5% 1/6W	
R 271	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 272	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R 273	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 274	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 275	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 276	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 277	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 278	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
R 281	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 282	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 283	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 284	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 301	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 302	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 303	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 304	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 305	QRD161J-225	CARBON RESISTOR	2.2M 5% 1/6W	
R 306	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 307	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 310	QRD167J-121	CARBON RESISTOR	120 5% 1/6W	
R 325	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R 326	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
R 328	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 330	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 331	QRD161J-120	CARBON RESISTOR	12 5% 1/6W	
R 332	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R 333	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 334	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 335	QRD161J-391	CARBON RESISTOR	390 5% 1/6W	
R 336	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
R 371	QRD161J-181	CARBON RESISTOR	180 5% 1/6W	
R 372	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 373	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 374	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R 375	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R 381	QRD161J-330	CARBON RESISTOR	33 5% 1/6W	
R 701	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 702	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 703	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 704	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 705	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 706	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 707	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 708	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 709	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 710	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 711	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 712	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 714	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 715	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 716	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 717	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 718	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 719	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 720	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 901	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
R 902	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 903	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 904	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 905	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 906	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 911	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
R 912	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 913	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R 914	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 915	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 916	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 995	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 996	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 997	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
S 301	QSTK101-V05	PUSH SW	R/P SW	
S 303	QSS7A43-V04	SLIDE SWITCH	FUNCTION SW	
S 331	QSS1301-101	SLIDE SWITCH	BEAT CUT	
S 701	QSQ1A11-V04Z	TACT SWITCH		
S 702	QSQ1A11-V04Z	TACT SWITCH		
S 703	QSQ1A11-V04Z	TACT SWITCH		
S 704	QSQ1A11-V04Z	TACT SWITCH		
S 705	QSQ1A11-V04Z	TACT SWITCH		
S 706	QSQ1A11-V04Z	TACT SWITCH		
S 710	QSP4K11-V01	PUSH SWITCH		
T 991	VTP57P2-121	POWER TRANS.		E, EN, G, GI, VX
T 991	VTP57P2-121	POWER TRANS.		B
VR361	QVDB42D-V01M	V RESISTOR	tone	
VR381	VCV1001-158M	V RESISTOR	MAIN	
X 701	EFO-GC4194A4	CERAMIC RESONAT		





BLOCK NO. 03

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 501	QCBB1HK-821Y	C CAPACITOR	820PF 10% 50V	
C 503	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V	
C 504	QETC1CM-106ZN	E CAPACITOR	10MF 20% 16V	
C 511	QCSB1HK-3R9	E CAPACITOR	3.9PF 10% 50V	
C 512	QCS11HJ-270	C CAPACITOR	27PF 5% 50V	
C 513	QFLC1HJ-1042M	M CAPACITOR	.10MF 5% 50V	
C 514	QFLC1HJ-4722M	M CAPACITOR	4700PF 5% 50V	
C 521	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
C 522	QFLC1HJ-4732M	M CAPACITOR	.047MF 5% 50V	
C 523	QFV71HJ-1542M	TF CAPACITOR	.15MF 5% 50V	
C 524	QEN61ER-4752N	NP.E. CAPACITOR	4.7MF +30%-10%	
C 529	QETC1AM-3362N	E CAPACITOR	33MF 20% 10V	
C 531	QCVB1CM-822Y	C CAPACITOR	8200PF 20% 16V	
C 541	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
C 542	QFLC1HJ-1032M	M CAPACITOR	.010MF 5% 50V	
C 543	QFLC1HJ-3932M	M CAPACITOR	.039MF 5% 50V	
C 545	QEN61HM-1052	NP.E. CAPACITOR	1.0MF 20% 50V	
C 546	QFLC1HJ-2232M	M CAPACITOR	.022MF 5% 50V	
C 561	QETC1AM-4762N	E CAPACITOR	47MF 20% 10V	
C 562	QETC1HM-4752N	E CAPACITOR	4.7MF 20% 50V	
C 581	QETC1AM-4772N	E CAPACITOR	470MF 20% 10V	
C 582	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 583	QETC1AM-2272N	E CAPACITOR	220MF 20% 10V	
C 584	QER41AM-107	E CAPACITOR		
C 591	VCP0012-1052	C CAPACITOR		
C 592	VCP0012-1052	C CAPACITOR		
C 593	QCC11EM-104V	C CAPACITOR	.10MF 20% 25V	
C 599	QETC1AM-1072N	E CAPACITOR	100MF 20% 10V	
C 601	QCS11HJ-330	C CAPACITOR	FOR CRYSTAL	
C 602	QCS11HJ-330	C CAPACITOR	FOR CRYSTAL	
C 603	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
C 604	QCC11EM-104V	C CAPACITOR	.10MF 20% 25V	
C 605	QCVB1CM-103Y	C CAPACITOR	.010MF 20% 16V	
C 606	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
C 611	QCS11HJ-101	C CAPACITOR	100PF 5% 50V	
C 612	QFLC1HJ-1032M	M CAPACITOR	.010MF 5% 50V	
C 613	QFLC1HJ-1032M	M CAPACITOR	.010MF 5% 50V	
C 614	QFN41HJ-332	M CAPACITOR	3300PF 5% 50V	
C 615	QFN41HJ-332	M CAPACITOR	3300PF 5% 50V	
C 631	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
C 632	QETC1AM-4772N	E CAPACITOR	470MF 20% 10V	
C 651	QETC1AM-1072N	E CAPACITOR	100MF 20% 10V	
C 652	QETC1AM-2262N	E CAPACITOR	22MF 20% 10V	
C 661	QETC1HM-4752N	E CAPACITOR	4.7MF 20% 50V	
C 662	QCXB1CM-472Y	C CAPACITOR	4700PF 20% 16V	
C 663	QCVB1CM-822Y	C CAPACITOR	8200PF 20% 16V	
C 664	QCBB1HK-820Y	C CAPACITOR	82PF 10% 50V	
C 665	QETC1EM-3352N	E CAPACITOR	3.3MF 20% 25V	
C 666	QCC11EM-123V	C CAPACITOR	.012MF 20% 25V	
C 671	QETC1HM-4752N	E CAPACITOR	4.7MF 20% 50V	
C 672	QCXB1CM-472Y	C CAPACITOR	4700PF 20% 16V	
C 673	QCVB1CM-822Y	C CAPACITOR	8200PF 20% 16V	
C 674	QCBB1HK-820Y	C CAPACITOR	82PF 10% 50V	
C 675	QETC1EM-3352N	E CAPACITOR	3.3MF 20% 25V	
C 676	QCC11EM-123V	C CAPACITOR	.012MF 20% 25V	

BLOCK NO. 04

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
CN501	VNC0272-015	CONNECTOR	TO PICK UP	
CN601	VNC0163-013	CONNECTOR	TO CPU	
IC501	TA8191F	IC	SERVO LSI	
IC502	BA6298FP	IC	POWER DRIVER	
IC601	TC9236AF	IC	1 CHIP PROCESSE	
IC603	TDA1311A	IC	D/A CONVERTER	
IC604	BA15218N	IC	L.P.F	
Q 501	2SA952(L,K)	TRANSISTOR		
Q 581	2SA952(L,K)	TRANSISTOR	5V REGULATOR	
Q 591	2SA1309(RS)	TRANSISTOR		
Q 651	DTA114TS	TRANSISTOR	EMPHASIS SW	
Q 661	DTC114TS	TRANSISTOR		
Q 671	DTC114TS	TRANSISTOR		
R 501	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R 502	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 504	QRD161J-202	CARBON RESISTOR	2.0K 5% 1/6W	
R 505	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
R 506	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 511	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R 512	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R 513	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 514	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 515	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 516	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 517	QRD161J-202	CARBON RESISTOR	2.0K 5% 1/6W	
R 521	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
R 522	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R 523	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 524	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R 525	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 529	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 531	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 532	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 533	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R 541	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R 542	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 543	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 544	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 545	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 548	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R 549	QRD161J-821	CARBON RESISTOR	820 5% 1/6W	
R 550	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 551	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 552	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 553	QRD161J-821	CARBON RESISTOR	820 5% 1/6W	
R 555	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 559	QRD161J-125	CARBON RESISTOR	1.2M 5% 1/6W	
R 561	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 562	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 563	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 564	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 565	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
R 566	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 583	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 591	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	

CD Board Parts List

BLOCK NO. 03

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 611	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 612	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 613	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 614	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 615	QRD161J-225	CARBON RESISTOR	2.2M 5% 1/6W	
R 616	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
R 631	QRD161J-820	CARBON RESISTOR	82 5% 1/6W	
R 638	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R 639	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 651	QRD161J-820	CARBON RESISTOR	82 5% 1/6W	
R 652	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 653	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 661	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 662	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 663	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 664	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 665	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 667	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 671	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 672	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 673	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 674	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 675	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 677	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
VR501	QV23523-154A2	V RESISTOR	TRACKING OFFSET	
X 601	CSA8.46MT	CERAMIC RESONAT	8.46MHZ	

■ Tuner Board

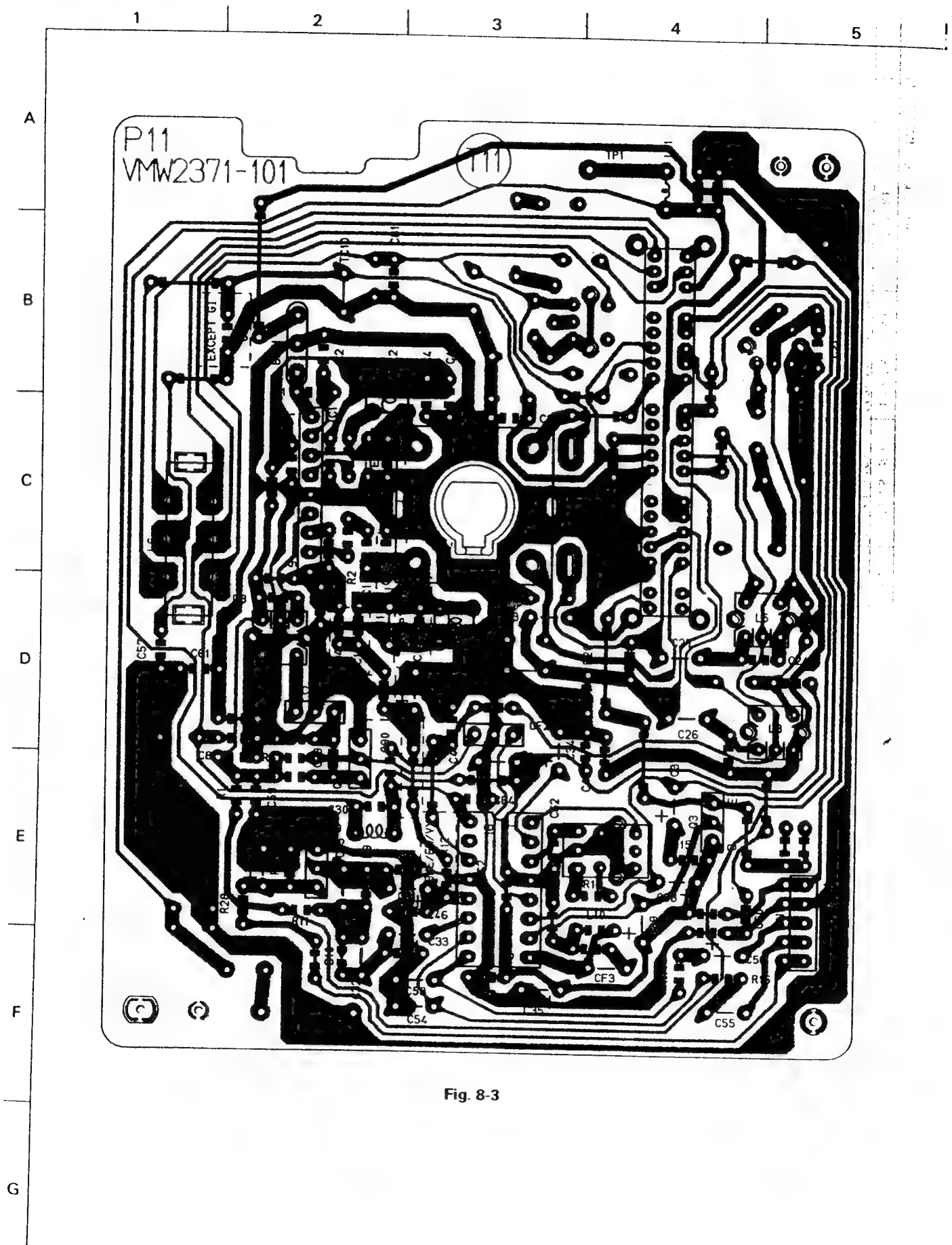


Fig. 8-3

BLOCK NO. 02

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	BPF 1	VBP4W3B-006	BANDPASS FILTER		VX
	BPF 1	VBP4M3B-005	BANDPASS FILTER		B,E,EN
	C 1	QCS11HJ-200	C CAPACITOR	20PF 5% 50V	
	C 2	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 3	QCSB1HJ-100Y	CER. CAPACITOR	10P 5% 50V	
	C 3	QCS11HJ-240	C CAPACITOR	24PF 5% 50V	
	C 4	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 5	QCS11HJ-150	C CAPACITOR	15PF 5% 50V	
	C 6	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 7	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 8	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 10	QCT30CH-180Y	C. CAPACITOR	18PF 5% 50V	
	C 11	QCT30CH-150Y	C CAPACITOR	15PF 5% 50V	
	C 12	QCT30UJ-5R6Y	C CAPACITOR	5.6PF 5% 50V	VX
	C 12	QCT30CH-5R6Y	C CAPACITOR	5.6PF 5% 50V	B,E,EN,G
	C 13	QCT30CH-200Y	C CAPACITOR	20PF 5% 50	GI
	C 13	QCT30CH-120Y	C CAPACITOR	12PF 5% 50V	B,E,EN,G
	C 14	QCT30UJ-3R3Y	C. CAPACITOR	3.3PF 5% 50V	B,E,EN,G,GI
	C 16	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 21	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 24	QCT05CH-220	C CAPACITOR	22PF 5% 50V	
	C 26	QCT25CH-181Z	C CAPACITOR	180PF 5% 50V	
	C 27	QCS11HJ-361	C CAPACITOR	360PF 5% 50V	
	C 29	QCVB1CN-103Y	C CAPACITOR	.010MF 30% 16V	
	C 30	QCSB1HK-6R8Y	C. CAPACITOR	6.8PF 10% 50V	
	C 31	QETC1CM-106ZM	E CAPACITOR	10MF 20% 16V	
	C 32	QCC31EM-333ZV	C CAPACITOR	.033MF 20% 25V	
	C 33	QETC1CM-106ZM	E CAPACITOR	10MF 20% 16V	
	C 34	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 35	QETC1AM-227ZM	E CAPACITOR	220MF 20% 10V	
	C 36	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
	C 37	QETC1HM-225ZM	E CAPACITOR	2.2MF 20% 50V	
	C 38	QETC1HM-684ZM	E. CAPACITOR	.68MF 20% 50V	
	C 39	QETC1HM-684ZM	E. CAPACITOR	.68MF 20% 50V	
	C 41	QETC1AM-476ZM	E CAPACITOR	47MF 20% 10V	
	C 42	QETC1HM-474ZM	E CAPACITOR	.47MF 20% 50V	B,E,EN,G,VX
	C 44	QCT30CH-180Y	C. CAPACITOR	18PF 5% 50V	
	C 45	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
	C 46	QCVB1CM-152Y	C CAPACITOR	1500PF 20% 16V	
	C 47	QCS11HJ-200	C CAPACITOR	20PF 5% 50V	
	C 48	QCSB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C 53	QCC31EM-153ZV	C. CAPACITOR	.015MF 20% 25V	
	C 54	QCC31EM-153ZV	C. CAPACITOR	.015MF 20% 25V	
	C 55	QETC1HM-474ZM	E CAPACITOR	.47MF 20% 50V	
	C 56	QETC1HM-474ZM	E CAPACITOR	.47MF 20% 50V	
	C 57	QCSB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C 58	QCSB1HK-102Y	C CAPACITOR	1000PF 10% 50V	
	C 59	QCSB1HK-102Y	C CAPACITOR	1000PF 10% 50V	
	C 60	QCSB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C 61	QCSB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C 62	QCSB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C 64	QCS11HJ-150	C CAPACITOR	15PF 5% 50V	
	C 81	QCS11HJ-100	C CAPACITOR	10PF 5% 50V	
	C 82	QCS11HJ-120	C CAPACITOR	12PF 5% 50V	B,E,EN,G,VX
	C 83	QCT25CH-680ZA	C CAPACITOR	68PF 5% 50V	

BLOCK NO. 02

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 85	QCS11HJ-560	C. CAPACITOR	56P 5% 50V	
	C 87	QCSB1HK-102Y	C CAPACITOR	1000PF 10% 50V	
	C 88	QCSB1HK-151Y	CER. CAPACITOR-S	150PF 10% 50V	GI,G
	C 90	QCSB1HM-1R0Y	C CAPACITOR	1.0PF 20% 50V	
	CF 1	VCF2L3B-105	C FILTER		
	CF 2	VCF2L3B-105	C FILTER		
	CF 3	VCF1222-111Z	C FILTER		
	D 1	1SS133	DIODE		
	D 2	1SS133	DIODE		
	D 3	1SS133	DIODE		
	D 4	MA346	VC DIODE	FM AFC	B,E,EN,G
	D 9	1SS133	DIODE		
	D 10	1SS133	DIODE		
	IC 1	TA7358P(N)	IC	FM FRONT END	
	IC 2	TA8186P	IC	FM AMIF	
	L 1	VQF1B20-021	OSC. COIL	FM OSC	VX
	L 1	VQF1B10-004	OSC COIL	FM OSC	B,E,EN
	L 2	VQF1B13-006	RF COIL	FM RF	VX
	L 2	VQF1B12-011	RF COIL	FM RF	B,E,EN
	L 3	VQL7T19-301	OSC COIL(LW)		
	L 5	VQW7U01-301	OSC COIL(MW)	AM OSC	
	L 6	VQB0108-321	BAR ANTENNA	AM RF	
	L 9	V03047-6	COIL	FM DET	
	L 10	VQP0024-120Y	INDUCTOR		
	L 11	V03047-17	COIL		
	Q 1	2SC1923(O)	TRANSISTOR	FM IF AMP	
	Q 2	DTC114TS	TRANSISTOR	MUTE	
	Q 3	DTA114YS	TRANSISTOR	MONO ST	
	R 1	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R 2	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
	R 3	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	B,E,EN,G,VX
	R 5	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 6	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 7	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
	R 11	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 12	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	B,E,EN,G,VX
	R 14	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
	R 15	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 16	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 17	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 18	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 20	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
	R 22	QRD161J-470	CARBON RESISTOR	47 5% 1/6W	
	R 24	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 25	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 28	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	SW 2	QSS7A84-V02	SLIDE SW	BAND	
	T 1	VQT7F12-111	IFT	FM IF	
	T 2	VQT7A21-106	IFT	AM IF	
	TC 9	QAT3114-300Z	T CAPACITOR		
	TC 10	QAT3114-300Z	T CAPACITOR		
	TC 11	QAT3114-100Z	T CAPACITOR		
	VC1-4	QAP1224-526	V CAPACITOR	VC01-04, TC01-04	VX
	VC1-4	QAP1224-520VS	V CAPACITOR	VC01-04, TC01-04	B,E,EN

Tuner Board Parts List

NU-ADZUBN B/E/EN/G/VI/VX

**9 Exploded View of Enclosure Component and Parts List**



● Enclosure Component Parts List

BLOCK NO. M1MM

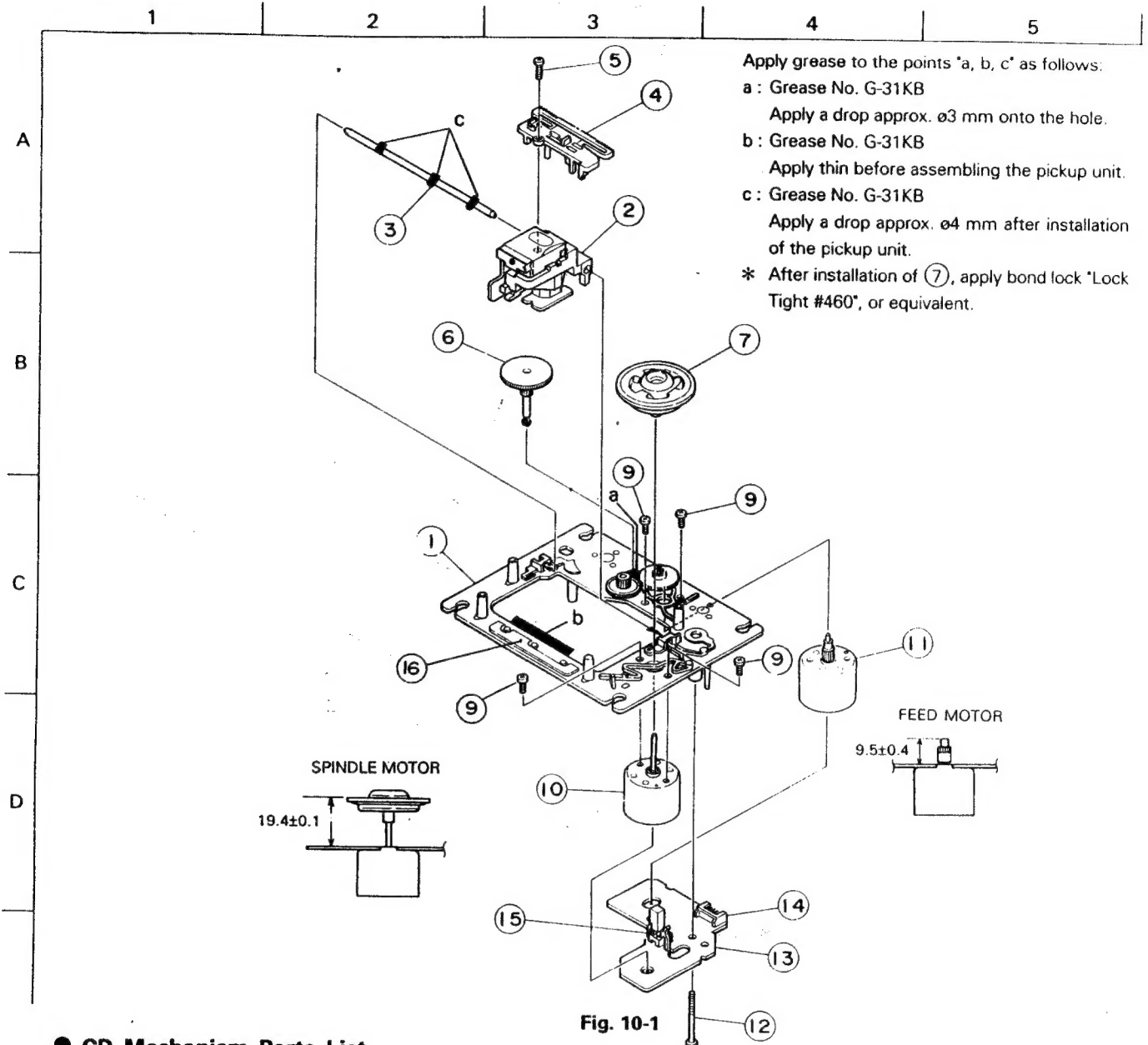
△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A	ZCRCX320K-FB	FRONT CABINET	SERVICE PARTS	1		
B	ZCRCX320K-CBK	CASSETTE CASE	SERVICE PARTS	1		
1	VJG1208-003	REAR CABINET	BLACK	1	B,GI,VX,G	
	VJG1208-002	REAR CABINET		1	E,EN	
2	VJA3033-00A	ROD ANT ASSY		1		
3	VYH6739-001	TERMINAL LUG		1		
4	SDSP3012N	SCREW	ROD ANT+REAR	1		
5	VYH5657-001	BATTERY SPRING	+/-	1		
6	VJH2011-001	HANDLE	(BLACK)	1		
7	VKH3012-069	SHAFT(E)		2		
8	SBSF3010Z	SCREW	FOR HANDLE+REAR	2		
9	VJC2016-023SS	BATTERY COVER	(BLACK)	1		
10	VYSA1R4-050	SPACER		1		
11	VND4220-001	LASER CAUTION		1		
14	VYN5167-M002T	NAME PLATE		1	B	
	VYN5167-M005T	NAME PLATE		1	E,EN	
	VYN5167-M008T	NAME PLATE		1	G	
	VYN5167-M108T	NAME PLATE		1	GI	
	VYN5167-M109T	NAME PLATE		1	VX	
15	VND4221-001	CLASS 1 LABEL		1		
16	SBSF3045Z	SCREW	FOR F.CAB+R.CAB	9		
17	SBSF3010Z	SCREW	AC SOCKET+R.CAB	2		
18	VYSR110-016	SPACER		1		
19	VYSS1R4-041	SPACER		1		
20	VYH3769-001	HEAT SINK		1		
21	SBSF3010Z	SCREW	IC+HEAT SINK	3		
22	GBSF4020Z	SCREW	POWER TRANS	2		
24	SBSF3010Z	SCREW	MECHA+REAR CABI	4		
25	VXP3565-001	MECH BUTTON	PAUSE	1		
26	VXP3565-002	MECH BUTTON	STOP	1		
27	VXP3565-003	MECH BUTTON	FF	1		
28	VXP3565-004	MECH BUTTON	REW	1		
29	VXP3565-005	MECH BUTTON	PLAY	1		
30	VXP3565-006	MECH BUTTON	REC	1		
31	SDST2004Z	SCREW	MECHBUTTON+MECH	6		
32	VJD1175-001	CD CASE		1		
33	VYH7765-001	LOCK LEVER	(BRACK)	1		
34	VYH4769-002	GEAR		1		
35	-----	CD MECHA		1		
36	VJD5410-005	PICK COVER		1		
37	E75609-001	INSULATOR	FOR CD MECHA	2		
38	E75609-002	INSULATOR	FOR CD MECHA	2		
39	VYH3788-001	CD MECHA HOLDER		1		
40	SBSF3010Z	SCREW	CD M.HOLDER+CD	4		
41	SDSF2006M	SCREW	PICK COVER	4		
42	VYH7822-001	LCD HOLDER		1		
43	SBSF3010Z	SCREW	CD BOARD	2		
44	VKZ4001-110	WIRE CLAMP		1		
45	Q03095-206	WASHER		1		
46	SBSF3010Z	SCREW	OP/CL PWB+CD	1		
47	SBSF3010Z	SCREW	LCD BOARD	3		
48	SBSF3010Z	SCREW	REC SW PWB+CD C	2		
49	VMA4610-001	CD SHIELD		1		
50	VJT1053-001	CD DOOR	(BLACK)	1		
51	VKS3547-001	CLAMPER		1		

BLOCK NO. M1MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	52	VYH7313-001R	MAGNET		1		
	53	VYH7314-001	YOKE		1		
	54	VYH7315-006	PAD		1		
	55	VKW5067-002	CD DOOR SPRING		1		
	56	VYH2276-001	TUNER CHASSIS	BLACK	1		
	57	VYH7819-001	DIAL DRUM		1		
	58	LPSP2610Z	SCREW	DIAL DRAM	1		
	59	VYH7856-001	TUNING SHAFT		1		
	60	REE3000X	E.WASHER		1		
	61	VYH3789-001	TUNING COVER		1		
	62	SBSF3010Z	SCREW	FOR TUNING COVE	2		
	63	VYH4034-001	STUD		5		
	64	VYH4585-003	ROLLER		5		
	65	VHR27K9-05AT	DIAL CORD		1		
	66	VKW5123-001	SPRING		1		
	67	VJN4143-001	POINTER		1		
	68	SBSF3010Z	SCREW	T.CHASSIS+T.PWB	3		
	69	SBSF3012Z	SCREW	T.CHASSIS+R.CAB.	2		
	71	VJG1212-00C	F.CABINET ASS'Y		1		
	75	VGS1001-014	SPEAKER		2		
	76	SBSF3010Z	SCREW	SPEAKER+F.CAB	8		
	77	VJD3952-001	LCD LENS		1		
	78	VJK3609-002	DIAL LENS		1	B,E,EN	
		VJK3609-003	DIAL LENS		1	G	
		VJK3609-004	DIAL LENS		1	GI	
		VJK3609-006	DIAL LENS		1	VX	
	79	VJD5431-001	CONTROL PLATE		1		
	80	VJT2321-001	CASSETTE DOOR		1		
	81	VJT4203-001	CASSETTE LENS		1		
	82	VYH5538-001	CASSETTE SPRING		1		
	83	VYH7366-001MM	GEAR		1		
	84	VKW5107-001	DOOR SPRING		1		
	86	VXL4426-001	TUNING KNOB		1		
	88	VXL4421-001	VOLUME KNOB	(BLACK)	1		
	89	VXL4422-001	KNOB	TONE	1		
	90	VXQ4116-001	BAND KNOB	FM/AM/SW/LW	1		
	91	VXS4395-001	FUNCTION KNOB	FUNCTION	1		
	92	VXP5182-001	CD EJECT BUTTON	(BLACK)	1		
	93	VXP3566-001	CD BUTTON	SEACH	1		
	94	SBSF2608Z	SCREW	CD BUTTON+F.CAB	1		
	95	VYH5483-001	BATTERY SPRING	BATT -	1		
	96	VMA4609-001	SHIELD		1		
	98	VND4003-053	FUSE LABEL		1		
	CLAMP	VMZ0135-001	FUSE CLAMP	UK=2PS	4		
	F 997	QMF51E2-3R15J1	FUSE		1	E,EN	
	F 998	QMF51E2-3R1J1BS	FUSE		1	B	
		QMF51E2-3R15J1	FUSE		1	E,EN,G,GI,VX	
	T 991	VTP57P2-12I	POWER TRANS		1	B	
		VTP57P2-12I	POWER TRANS		1	E,EN,G,GI,VX	

# 10 Exploded View of Mechanism Component Parts and Parts List

## ■ CD Mechanism M3



## ● CD Mechanism Parts List

BLOCK NO. M3MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	EPB-002A	MECHA BASE ASSY		1
	2	OPTIMA-6S	CD PICK-UP UNIT		1
	3	E406777-001	PICK-UP SHAFT		1
	4	E307746-001	CD RACK		1
	5	SDSF2006Z	SCREW	CD RACK ASS'Y	1
	6	EPB-003A	MECHA GEAR		1
	7	E75807-301	TURN TABLE		1
	9	SDSP2003N	SCREW	FOR MOTOR	4
	10	E406783-001	DC MOTOR	SPINDLE	1
	11	E406784-001SA	DC MOTOR ASS'Y	FEED	1
	12	E75832-001	SPECIAL SCREW	M.LEAF SWITCH	1
	13	EMW10190-001	PRINTED BOARD	LEAF SWITCH	1
	14	EMV5109-006B	CONNECTER		1
	15	ESB1100-005	LEAF SWITCH		1
	16	E407212-001	LR DAMPER		1



# **Cassette Mechanism Assembly M2**

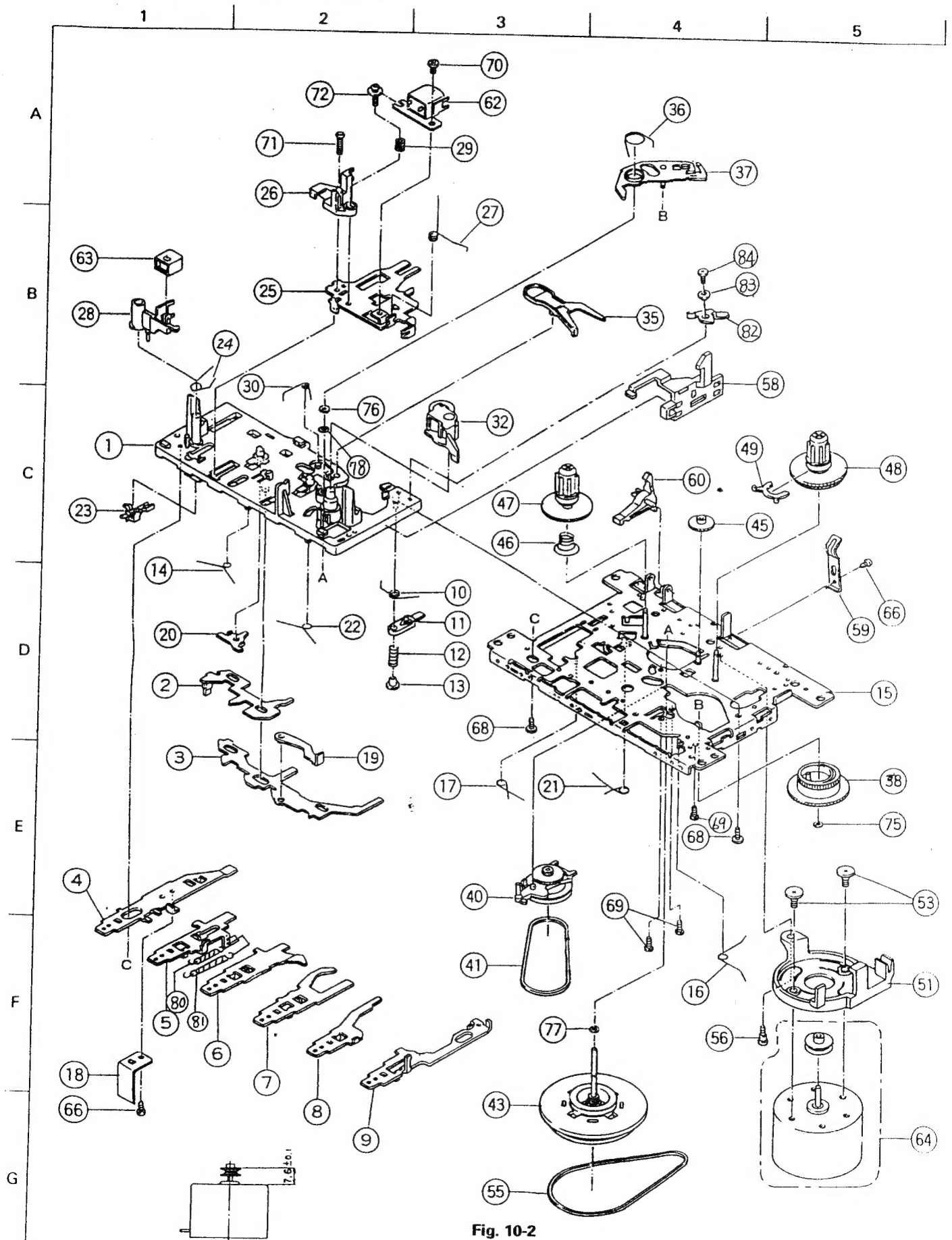


Fig. 10-2

# ● Cassette Mechanism Component Parts List

BLOCK NO. **M2MM** ☐ ☐ ☐ ☐

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
1	1921143012T	BASE ASS'Y		1		
2	19211409T	SWITCH ACTUATOR		1		
3	19211408T	LOCK CAM		1		
4	19211403T	REC BUTT.LEVER		1		
5	19211483T	REW BUT.LEVER		1		
6	19211404T	REW BUTT. LEVER		1		
7	19211405T	FF BUTTON LEVER		1		
8	19211406T	STOP BUTT.LEVER		1		
9	19211460T	PAUSE BUT.LEVER		1		
10	19211413T	P CONT. SPRING		1		
11	19211455T	PAUSE LEVER (E)		1		
12	19211412T	SPRING		1		
13	19211411T	PAUSE STOPPER		1		
14	19211414T	TORSION SPRING		1		
15	1921015012T	CHASSIS ASS'Y		1		
16	19211416T	TORSION SPRING		1		
17	19211417T	TORSION SPRING		1		
18	15100212T	REC SP. PLATE		1		
19	182101159T	E.KICK LEVER		1		
20	19211420T	STOPPER		1		
21	19211421T	TORSION SPRING		1		
22	19211415T	TORSION SPRING		1		
23	MSW-1541T	LEAF SWITCH	MSW-1541T	1		
24	19210310T	MG ARM SPRING		1		
25	19210311T	HEAD PANEL		1		
26	19210304AT	HEAD BASE		1		
27	19210309T	PANEL P SPRING		1		
28	19210305T	MAGNET HEAD ARM		1		
29	18210307T	AZIMUTH SPRING		1		
30	19211418AT	SPRING		1		
32	192104309T	P.ROLL. ARM ASY		1		
35	19212604TT	SENSING LEVER		1		
36	19212605T	TORSION SPRING		1		
37	1921265022T	GEAR PLATE ASSY		1		
38	19212602T	CAM GEAR		1		
40	192107308T	RF CLUTCH ASS'Y		1		
41	18210711T	RF.BELT		1		
43	1921093032T	FLYWHEEL ASS'Y		1		
45	18211070T	F.FORWARD GEAR		1		
46	18211099T	BACK TENSION SP		1		
47	192105304T	S. REEL ASS'Y		1		
48	192105303T	T. REEL ASS'Y		1		
49	19210506T	SENSOR		1		
51	18211289AT	MOTOR BRACKET		1		
53	19211202T	COLLAR SCREW		2		
55	182112138T	MAIN BELT		1		
56	19211203T	MB SCREW		1		
58	19211301T	EJ. SLIDE LEVER		1		
59	18291001T	PACK SPRING		1		
60	18211069T	REC.SAF.LEVER		1		
62	MS15R-AA2N1	R/P HEAD	MS15R-AA2NI	1		
63	PHK-MSI-6A	E HEAD	PH-K380-MS1-6A	1		
64	192112328T	MOTOR ASS'Y	TN-21ZVC-1378	1		
66	91790000T	TAPPING SCREW	M2 X 3	2		
68	96790000T	TAPPING SCREW	M2 X 5	2		
69	99991809T	SPECIAL SCREW	CAMERA M2X4.5	3		
70	91150000T	SCREW(M2 X 3)	M2 X 3	1		
71	90040000T	SCREW(M2 X 6)	M2 X 6	1		
72	99220000T	SCREW(M2 X 7)	M2 X 7	1		
75	94220000T	POLY.CUT WASHER	1.2X3.8X0.3	1		
76	99990313T	POLY.CUT WASHER	1.45X3.8X0.5	1		
77	98820000T	P WASHER	2X3.5X0.4	1		
78	99990003T	POLYSLIDER WAS.	2.1X4X0.13	1		
80	18210150T	PLAY BUTTON LEV		1		
81	18211311T	TENSION SPRING		1		
82	19211434T	P.ROLLER ARM		1		
83	19211437T	P ARM COLLAR		1		
84	99992041T	SPECIAL SCREW	M2 X 3	1		

# 11 Packing Illustration and Parts List

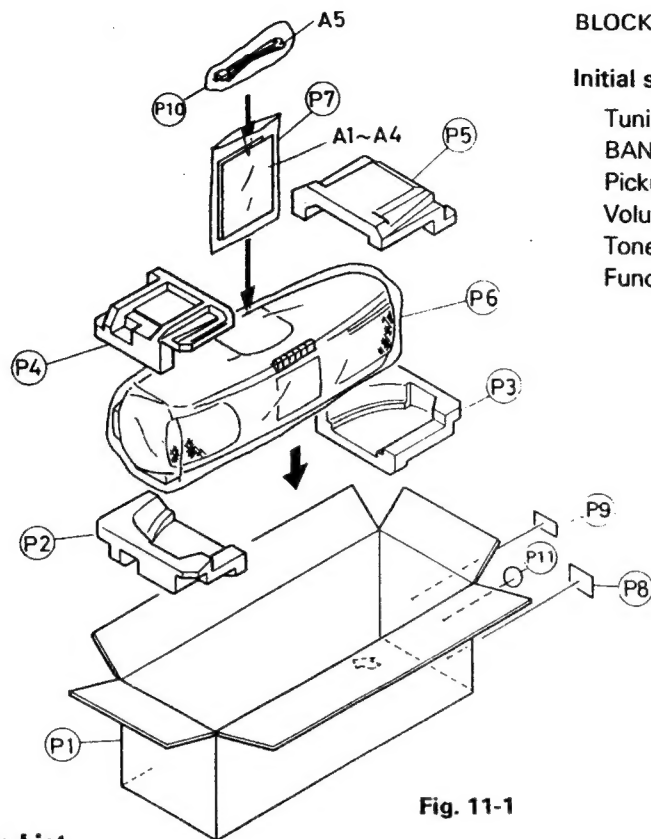


Fig. 11-1

## ● Packing Parts List

BLOCK NO. M4MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	VNN5167-261M	INSTRUCTIONS		1	G,E,EN	
		VNN5167-271M	INSTRUCTIONS		1	EN	
		VNN5167-911M	INSTRUCTIONS		1	VX	
		VNN5167-921M	INSTRUCTIONS		1	VX	
		VNN5167-251M	INSTRUCTIONS		1	B,GI	
	A 2	BT-20135	WARRANTY CARD		1	G	
		BT-20066A	WARRANTY CARD		1	B	
		BT20060	WARRANTY CARD		1	B	
	A 4	E43486-340B	SAFETY INST.SHE		1	B	
	A 5	QMP39F0-183	POWER CORD		1	E,EN,G,GI,VX	
		QMP5520-183BS	POWER CORD	3PIN CORD	1	B	
	P 1	VPC5167-M001	CARTON		1		
	P 2	VPH1625-001	CUSHION(BOTT,L)		1		
	P 3	VPH1625-002	CUSHION(BOTT,R)		1		
	P 4	VPH1626-001	CUSHION(UP,L)		1		
	P 5	VPH1626-002	CUSHION(UP,R)		1		
	P 6	VPE3020-067	POLY BAG	FOR SET	1		
	P 7	VPE3005-007	POLY BAG	FOR INST BOOK	1		
	P 8	VND3025-200	BAP AODE LABEL		1		
	P 9	VND3044-003	SERIAL TICKET		1	E,VX,EN,GI	
		VND3044-005	SERIAL TICKET		1	G	
		VND3044-004	SERIAL TICKET		1	B	
	P 10	QPGA015-03503	POLY BAG	FOR POWER CORD	1	B	
	P 11	GZLA001-011	APPROVAL MARK		1	G,E,EN	

# JVC

VICTOR COMPANY OF JAPAN, LIMITED.

AUDIO PRODUCTS DIVISION

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